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GREATER TORONTO EDITION - JULY 2008 - VOLUME 17 - NO. 67

DIGITAL PHOTOGRAPHY



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DIGITAL PROJECTS



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EDITION
JULY 2002

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Lab Tests: Full-panel monitors

Ad Deadline: 2nd, July 8
Distribution begins: 2nd, July 8

September 2002

Cover story: Changing a career in IT

Lab Tests: Solid and laser printers

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FROM THE EDITOR

Summer is coming, and to many of us, that means fun, sun, and snapshots. Increasingly, people think about taking pictures, digital cameras come to mind. While virtually everyone in the photo business sees digital shooting large in the future, there are still some major obstacles that digital snapshots will encounter.

Digital cameras still cost more, often a lot more, than comparable film cameras. The price difference is shrinking, and curiously seems to be one and a half to three times more for digital than for film—a couple of years ago digital was five to 10 times as expensive.

Two years ago a two-megapixel camera would set you back a grand or more; today you can buy four-megapixel models for that amount. Meanwhile, the two-megapixel clag hasn't become obsolete, but rather has been put into more affordable lines. An entry-level, two-megapixel digital camera now costs around \$300—relatively speaking, a very good price but still higher than entry-level, point-and-shoot film cameras.

Once you get past the cost, another barrier is the lack of a photo-finisher infrastructure for digital images. Think for a moment about how easy it is to have a roll of film processed into prints. You can mail it in, drop it off at the mall, even take it to your corner confectionery. All those points of service facilitate spontaneous activity. Getting prints from a digital camera is still a project in itself. Is your printer able to do e-printing? Printing, but that isn't everyone's cup of tea, yet the digital equivalent to dropping your film off at the mall hasn't happened yet.

Part of it is the scarcity of retail outlets that will handle film or digital media with equal ease. That's rapidly changing, as a new study by InfoTrends Research Group (www.infotrends.com) indicates. In the report, *Photo Kiosk and Retail Digital Photo-finisher Forecast*, InfoTrends states that almost half of the photo kiosks that will ship this year will be designed specifically for digital cameras users.

A case in point is the new TruePrint Self-Service Print kiosks that Olympus (www.olympus.com) introduced in Canada at the end of May. The kiosk is PC based, with a touch-screen menu system and a multi-card reader that supports most digital camera memory types.

Customers will be able to insert the memory card from their camera and see preview of their images on the screen. They can make a free choice from the menu, such as number and size of prints, and can also make minor adjustments to colour and brightness. Prints are output on a high quality dye sublimation printer, but the system will be able to tie into an existing kiosk setup.

The kiosk also includes a CD recorder, so the customer can burn their digital images onto a CD. Olympus intends to place these in the usual retail outlets, but also in what it calls "high photo output" places like hotels and resorts—even cruise ships. You know, in a couple of years, our favourite convenience stores may have one too.

During the introduction of the TruePrint kiosk, Olympus America Inc. spokesman, John Biskeroff noted that presently less

than one percent of images taken with a digital camera are printed at a retail photo-finisher outlet (about nine percent are printed at home, but 88 percent are not printed at all). Clearly retail digital photo-finishers are still in an infancy, with plenty of room to grow.

As for digital photography as a whole, interest remains high. For example, at TCF we conducted a readership survey last year, and discovered that more than 90 percent of respondents wanted more on digital photography. As part of our research on how to do that, we convened an advisory council made up of representatives from the photography industry and the information technology industry.

Over dinner one evening several weeks ago, we had a wide-ranging discussion about the emerging digital photography landscape. To those in the IT sector, digital photography was seen as simply a natural progression of the digital drive into every industrial sector. For the photo industry, digital seems more like a new force, an microcosmos that has to be adjusted to. But both groups read the same research, and more or less agree on the future—and it is digital.

Enjoy the sun, enjoy the summer!
David Tanaka, Editor

Click!



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More on the recordable media tariff

I am pleased that there is to be a "royalty tariff" on CDs and DVDs. Now I can make as many copies of music and other



CDs as I wish, and know that the copyright holders have been fully compensated. No longer will the copying of music and video be illegal. I may even sell copies of the music to my friends, adding a small markup for my effort, and have a clear conscience knowing that the music studios are finally happy, and total-

ly satisfied.

Anonymous (by request)

Show me the best!

One of the things that always bothers me about notebook reviews, [see Lab Report, June issue] is that display resolution only ever gets mentioned in passing.

While the display's physical size is always documented, display resolution is only presented in the comparison table.

There is a huge difference in functionality between a laptop that has a 15.5-inch XGA (1,554x1,058) display, and one of similar size that does SXGA (1,400x1,050) or UGA (1,600x1,200).

Higher resolution displays present 50 percent more screen area and data than

the standard XGA screens of the same size.

This is especially significant when running Windows programs.

This can mean full- or two-page editing when doing word processing and ERP [desktop publishing], or 50 percent more drawing area visible when doing CAD [computer-aided design], or the ability to have several windows and applications open and visible when doing Web development.

So, a little less emphasis on benchmarks and DVD movies, and a little more attention to desktop application usability in future notebook reviews, if you please. Any display links good with the screen saver or—show me the screen fonts!

Glen C. Taylor

We stand corrected on Tree

In your May editorial you stated that the Tree won't support GPRS until Rogers KILT rolls out its network.

Actually the network rollout is not the issue, it's the Tree software that's not ready.

Users will need to upgrade their OS when handpicking features at sometime this year.

Leo Freeman

TCP reply: We checked with the company, and Mr. Freeman is correct—the lack of availability of GPRS is a function of Handpring not yet having the software for the Tree. □

Dot-ca authority holds second election

OTTAWA, Ont.—While the powerful Internet Corporation for Assigned Names and Numbers (ICANN) outlaws the concept of democratic control over top-level domains like dot-com and dot-net, the Canadian agency in charge of that country's domain-name space is launching its second public election of board members.

The Canadian Internet Registration Authority (CIRA), which took control of the country-code top-level domain (.ca) known as dot-ca in late 2000 and held its first election of board members a year ago, will collect votes for three board seats during the second week in June.

Initially notified as a group, the nine elected members of the 12-person board were posted in three to seven mailing from one year to three years in that the Internet authority could hold annual

elections for a third of the board each year.

ICANN, whose board is made up of 19 directors, has just five elected members, chosen during a trial online vote nearly two years ago.

While CIRA may appear more democratic than ICANN, the composition of its board appears to be of less interest to even Canadian domain-name registrars.

The current campaign has attracted eight candidates, but six of them were recommended by the current CIRA board, which rank-and-file members drumming up the required 30 endorsements for just two additional nominees.

Nominated by members was Richard Anderson, a well-known political adviser and president of the Ottawa area management consulting firm ASCI. Anderson, and March Jeffcott, president

of consumer domain-name services (DNS) company EasyDNS Technologies in Toronto.

While CIRA may appear more democratic than ICANN, the composition of its board appears to be of less interest to even Canadian domain-name registrants.

Those nominated by CIRA included two existing board members: Internet law expert Michael Golin and Web development company president Denis Turgeon.

A third current director, Bruce Pirouane, a founder of the NHL's

Ottawa Senators, is not running again.

Also recommended for the campaign by the CIRA board were intellectual property lawyer Danielle Boies, Web-hosting company executive Glenora Berg, National Capital FreeNet (Ottawa) director Ian MacKinnon and e-commerce consultant Ramona Weirich.

The election campaign, which began in mid-May, was being conducted largely on the CIRA Web site where candidates fielded questions from members on an online bulletin board.

Eligible to vote, CIRA says, were the 140,000 holders of dot-ca domain names.

Voting ended June 13. CIRA said results should be posted on its Web site by June 20. More information can be found [here: www.cira.ca/election](http://www.cira.ca/election).

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WHAT'S NEW

Sony adds to Aibo family

To celebrate the third anniversary of its Aibo Entertainment Robot (www.aiborobot.com), Sony has announced a new addition to its LM series of robots.

The new Aibo IRS-141, which comes in Channel Brown, will feature a new look similar to that of a bulldog or pig.

It has a suggested retail price of US\$599 and includes the new software, Aibo Pal Special Edition. According to Sony, the new package gives the robot an evergent personality, 75-word vocabulary, and includes a new Walk and Explore mode that allows it to explore its environment and snap photos of things it finds interesting. The software also includes more than 200 new moves and dances for the LM series, including a new wake-up dance to greet its owner.

—TCP Staff



New open source alternatives for office productivity



Spotlight

For those with a taste for open source office productivity, the OpenOffice.org 1.0 suite is now available. The suite includes a word processor, a spreadsheet, a presentation program, and a database manager.



Colour Treo unveiled

While preparing to eventually release a Treo device with a colour display, HandSpring, Inc. (www.handspring.com) unveiled two such devices in late May: the Treo 270 communicator and the Treo 90, which it is classifying as an organizer.

Like this original monochrome Treo, the 270 integrates a dual-band GSM phone, wireless applications like email and Internet browsing, and a Palm OS operating system. It has a built-in, backlit QWERTY keyboard and extended battery life, according to HandSpring. The Treo 270 is priced at US\$499 with GSM service activation or US\$599 without it. (Canadian pricing and release dates were not available at press time).

HandSpring says the 270's colour display offers better clarity and visibility of text and graphics. The built-in, backlit keyboard allows the device to be used with one hand and in low light conditions. This rechargeable battery allows up to three hours of talk time and 150 hours of standby time, according to the company.

The Treo 270 offers all of the capabilities of the original Treo 260, including H.264M format of photo numbers next camera quality in three megapixels or fewer; 60 second dial; a full pad on the keyboard; call log; three-way calling; video ID; and speaker phone. The Treo 270 has 128MB of memory and a rechargeable NiMH battery.

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The Treo 270 is a dual-band GSM phone, wireless applications like email and Internet browsing, and a Palm OS operating system.

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—TCP Staff



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Why use it?	<ul style="list-style-type: none"> Cost-effective Internet solution Employment of LANs can access the Web, send e-mail Readily implemented in small Web servers can be connected to the Internet 	<ul style="list-style-type: none"> Employees can access the Web and e-mail Readily implemented in small Web servers for intranets 	<ul style="list-style-type: none"> Readily implemented in small to large Web servers Allows videoconferencing applications Able to host Web sites or FTP sites Supports large Internet Virtual Private Networks (VPNs) 	<ul style="list-style-type: none"> Employees can access the Web and e-mail Company Web site or e-mail servers on the Internet Bandwidth supports applications such as video, Internet Group Chat and Internet-based videoconferencing 	<ul style="list-style-type: none"> Supports a high-level, site-based network that requires no additional bandwidth for time-critical applications Can be used as needed change

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The coming world of digital photography

By Jeff Evans

How many pictures do you take in an average year? If you're like most Canadians, the answer is "too."

According to figures from industry analyst iFoss-Real (www.ifsos-real.com), about 600,000 digital cameras will be sold in Canada in 2002 (compared to around 350,000 in 2000), and up to 1.2 million may be sold in 2003. With about 12 million households in Canada, this means that within a very few years, most Canadian families and businesses will have a digital camera as well as one or more traditional film cameras.

No charge for snapping

According to the representatives of digital camera and photo printer manufacturers we talked to, one of the most striking differences between old-style analog bubble photography and its high-tech digital cousin is that people with digital cameras take vastly more pictures than those with film cameras, but they only print out a tiny portion of the images they've captured. An iFoss-Real representative estimates that less than five percent of digital images end up being printed. The reasons are several:

- Digital cameras allow the user to preview pictures. Unwanted images can be discarded within the camera or on the PC before printing, while a film camera user typically has to shoot then print the whole roll in order to select the good ones.
- Once you've purchased a digital camera (and necessary memory cards), taking a digital image is essentially free, while every click of film camera shutter represents a real cash outlay. Digital camera owners do lots of clicking.
- Digital camera images can be saved, shared and viewed in many ways: burned to a CD, stored on a hard drive, floppy or memory card, published on a Web site, or attached to an e-mail to Aunt Martha. Making prints from images is only one of many, many options.

Unleash dragage

Most of the current inkjet printers, even the sub-\$100 models, have incredibly sophisticated print heads and ink technology, which combine to produce very high-quality images under ideal conditions.

If you are an imaging hobbyist, printmaking can be rewarding in itself, and in fact, photographic printmaking using high-end inkjet printers has become a legitimate art form. If you are merely interested in capturing lots of the glasses, however, inkjet printing can be a dragage.

"Nearly half of all photo kiosks to be shipped in 2002 will be designed exclusively for digital camera users."

Do-it-yourself printmaking gives you more control over the process and immediate results—and for many individuals and small businesses, that's a strong motivation. Still, it's a good deal more work than dropping off a roll of film at the dragage.

If you want to have your digital

images printed professionally, an increasing number of photofinishers and camera shops offer outcropping or kiosk photo printers, as well as online photo printing services.

In mid-May, InfoTrends Research Group (www.infotrends.com) and in its report, *Photo Kiosk and Retail Digital PhotoPrinting Forecast*, that "nearly half of all photo kiosks to be shipped in 2002 will be designed exclusively for digital camera users." InfoTrends says that cur-

rently, photo kiosks are used mainly to make a few copies, or print enlargements, but it expects digital camera owners will use them as a "high-volume" method of printmaking.

The report also predicts that more photo retailers will be installing kiosks that will be able to read images from memory devices. The implication is that it will soon not matter whether you have a digital or film camera—your local photofinisher will be able to make prints from either. □



Keeping track of your images

The continuing search for the perfect image cataloging and software

By Frank Leeb

As scanners and digital cameras continue to proliferate, hard drives are quickly getting clogged with image files. Windows XP provides some basic tools for managing this graphic influx, but there's still a big need for third-party software.

Image viewing, enhancing, and manipulating utilities are the first line of defense. They let you browse visually through your image files and provide vital tools for resizing, adjusting colour and contrast, printing, posting on Web pages, and converting from one to another of the many popular file formats.

There are quite a number of these utilities to choose from. Previously, we've examined Canada's own ACDSee 4.0 from ACD Systems (www.acdsystems.com) and Media Center Plus from

Continued on page 14



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Announcing desktop software that can search for a file – even if you've forgotten its name.

It's called Search Companion, a feature in Windows XP[®] Professional that makes it easy to find files and folders on your PC. Users can enter a part of the file name, a title or sentence within the file – or even the time or date it was last opened – and Search Companion will scan your PC for the appropriate match. Office XP is also designed to make basic tasks faster and easier. With its improved

calendarizing features, users can check colleagues' schedules before selecting a meeting time. (If the time they propose isn't ideal, a new time can be proposed right within the original message.) Office XP also enables users to consolidate multiple email accounts, MSN[®] Messenger, and their personal

information into one, convenient location. And with our new Smart Tags in both Office XP and Windows XP Professional, context-sensitive options appear on-screen when and where you need them to deliver relevant information about formatting documents, correcting formulas, or linking to information on the Web. For more details on how Windows XP Professional and Office XP can help make your entire organization more productive, contact your preferred technology vendor or visit us at: www.microsoft.com/desktop

Workers using Windows XP Professional are 25% more productive.

An independent study by American Institute for Research concluded that users of Windows XP Professional are 25% more productive than users of Windows 2000 while doing common business tasks (i.e. installing programs, sending email, installing new applications). The Institute also found that users could save an average of over 23 minutes on 11 common tasks with Office XP versus Office 2000.



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Photo albums on your handheld

Continued from page 16

may recall a Windows CE-based handheld unit from Sharp Electronics some years ago that had a built-in digital camera. But, at the time, the quality of the display was nowhere near as good as you'll find on today's handhelds. Pictures of loved ones displayed on these early handhelds looked like stick people drawings compared to what is available now.

For users of Pocket PC-based systems, picture display software is something you'll have to get from a third-party provider as it's not part of the core applications provided by Microsoft. However, some hardware manufacturers are wisely recognizing this need and bundling their software with their devices.

If you own a handheld that doesn't include picture display software, there are lots of freeware and shareware solutions. One application, called Image Explorer, is from a small U.K. company, TangCode (www.tangcode.com). It not only allows you to display images, you can also use it to zoom in on any part of the image. It's fast and free.

For a bit more utility, try something like Applian Technologies' (www.applian.com) PicturePerfect 3.1 for the Pocket PC, which gives you thumbnail views of your pictures, image-rotating tools, and lets you create slideshows with transition effects that can be synchronized with MP3 music. You can purchase and download the software from the company's site for US\$19.95 or download the trial version.

To get a better look at the broadest possible range of both paid and freeware picture display and editing software for your handheld, visit one of the many PocketPC enthusiast Web sites, such as www.pocketpc.com, where you'll find lots of choices (and lots of cool games) too. □

Photographs from your inkjet

If you are a regular ITD reader, chances are good that you own an inkjet printer. You may also own a digital camera. Put the two together and you have the makings of a personal photo lab. Here are some tips to get the most out of your equipment.

Rule of 200 • Most digital cameras allow you to select from a number of image sizes. Use the "rule of 200" to minimize how large you can print a given image on an inkjet printer. Take the image's dimensions in pixels and divide by 200; the result will be a safe print size, in inches. Thus a VGA resolution image (640x480 pixels) could safely be printed at 3.2x2.4 inches without noticeable jaggedness or coarse resolution becoming a problem.

With a two megapixel image (1,600x1,200 pixels), you can expect photo quality 6x4 prints, and so on. This is really just a rule of thumb, so use it as a starting point with your own equipment.

Compression • Most digital cameras save images in JPEG format, which compresses files to reduce their size. This compression format is called a lossy method, because some information about the

image is discarded as part of the compression.

For best results, use a camera setting that applies less compression—these are called "large," or "high quality." Or, if your camera can save images in a loss-compressed format such as TIFF, use it. Fewer images will fit on the memory card, but the quality will be better.

Digital darkness touch-ups • Check the photo in an image editor and retouch any obvious flaws, such as red eyes, if necessary. Digital-image enthusiasts hail Photoshop, but there are a number of cheaper packages—MS PaintShop Pro (www.mscc.com), Jasc Paint Shop Pro (www.jasc.com), and Ulead PhotoImpact (www.ulead.com)—that make touch-up and other image-editing tasks easy.

Set the printer it's a photo • Use the printer setting for photo quality or high quality, and use photo paper. Printing a high-resolution image on plain bond paper is a waste of ink. Printing at top resolution tends to be quite slow and uses more system resources, but the results, especially on photo-quality paper, can rival prints from a photocopier.

Simple checks • To check that the size and placement of your image is right, do a test print at low resolution on bond paper.

Before making your final print, make sure you have enough ink. Photo printing uses large amounts of ink, and there is little more frustrating than printing out half of an image, then running out of ink.

Some paper and ink combinations take longer to dry, so make sure a print has dried thoroughly before handling.

Framing the masterpiece • Treat the print with reasonable care. All photo prints, whether from a photo/slide or inkjet printer, are fairly fragile. Framing offers a level of protection, and also enhances the photo.

Dye-based inkjet inks tend to fade quickly in sunlight, so keep the print out of direct sunlight.

Some Epson printer models use pigment-based inks that are "lightfast" and tolerate strong light. All other current inkjets use dye-based colours, which are "lightfast," at least quite quickly, although manufacturers are claiming better image permanence with the latest generations of inkjets. □

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Panasonic Lumix LC5 shines

By Sean Carraher

Panasonic has moved us an assortment of digital still cameras over the past few years, but the introduction of the Lumix line this year indicates it's making a serious push into the Canadian marketplace. The line looks subtly impressive throughout, but the high-end model is definitely worth note: at four megapixels and a maximum resolution of 2,340x1,920 pixels, the Lumix LC5 enters the market near the top of the consumer category and features fairly extensive manual control over image taking, which means it should appeal to advanced amateur photographers in addition to technology enthusiasts.

Panasonic has teamed up with Leica for the Lumix line, and the LC5 features Leica's DC Vario-Summorum 3X optical zoom lens. There is a selector on the front of the camera that allows you to easily switch between auto focus, manual, and macro mode. If you choose manual focus, there's a focus ring around the base of the lens, and though it's servo-controlled, the response time is very good (with some cameras, the lag time is

enough that you can end up going past the focus point you want).

The camera features both optical and LCD viewfinders. The optical viewfinder has a diopter adjustment wheel (so you can set the focus to match your own eye). The LCD viewfinder is a 2.5-inch TFT display that is very bright and crystal clear, and since you have to use the LCD when focusing manually, that clarity is a real necessity. (Again, some other cameras have a slightly grainy LCD screen, which makes it harder to determine whether something is in focus.)

The included LCD shade attachment is a very nice touch. Anyone who's worked extensively with LCD viewfinders knows they're great indoors but tend to wash out when you get outdoors, which limits the usability of a digital camera. The shade accessory attaches to the tripod mount on the bottom of the camera (the attachment has its own tripod mount), so you don't lose that option, and covers the LCD with a little flip-up door. When you lift the door, two spring-loaded side panels pop out, shielding the LCD from three direc-

tions (left, right, and top), and making the display usable even in bright sunlight. Why no one has thought of this before is a mystery; it's probably the most useful innovation we've seen in some time.

The camera can be set to a number of shooting modes, including single, burst (four to eight frames per second), bracket, spot focus, and movie. The QuickTime movie mode is limited only by the size of your memory card, and shoots in 320x240 resolution at 30 frames per second, with audio. Still images can be saved as JPEG or uncompressed TIFF files, and the camera is DPOF compatible.

The Lumix line is one of the few we know of that uses MultiMedia Card/Secure Digital for storage. This camera comes with a 32 MB card, but you can certainly buy larger capacity cards—64 and 128 MB versions are available, and 256 and 512 MB are supposedly just around the corner.

The camera is powered by a proprietary Lithium Ion rechargeable battery, which tops up when you plug the camera into the wall using the included AC power adapter. Battery life is generally good, though the



Lumix DMC-LC5 R

Best Camera, 2004. www.panasonic.ca
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LCD tends to suck back power fairly quickly—as all good LCD displays seem to do. Those who plan to spend extended periods out in the field will probably want to invest in additional batteries.

The LC5 has a built-in flash in the body of the camera, as well as a hot-shoe on the top, in case you want a more powerful external flash to get your pictures to the PC; you use the included USB cable and digital camera software. The software is compatible with Windows 98, Me, 2000, and XP, as well as Mac OS 9.x and OS X.

Though its price may seem prohibitive, the Lumix LC5 really is a top-notch camera with a lot to recommend it. □

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Sony refreshes digicam line

By Geoff Wheeler/night

Earlier this year, Sony of Canada Ltd. (www.sony.ca) showed off an extensive lineup of new digital cameras—as well as other products that integrated digital cameras and digital video functions.

One hallmark of Sony digital cameras has been the extensive range of storage media they use. Not content with the conventional picture storage options using solid-state memory cards, Sony cameras offer a choice between proprietary Sony solid-state memory technology (Memory Stick), picture storage on floppy disks that can be loaded directly into the camera, and most recently, storage on CD-Rs or CD-RWs.

In its latest offerings, the low end of the range is occupied by Sony's Cybershot models, starting with the chunky, but well-priced \$399 Cybershot DSC-P11. This is a decent-looking two-megapixel camera with a simple lens (no optical zoom but 3X digital zoom) and a supplied 8 MB Memory Stick. The low price is achieved by eliminating the LCD display common on most digital cameras. To look at any pictures you take on the DSC-P11, you'll need to load them onto something else with a display.

Probably the best collection of style and value in Sony's new range is the \$850 Sony DSC-P55, which provides 3.2-megapixel picture quality, a 3X optical zoom, a 5-inch built-in LCD, and an AV-Out socket, so you can plug it directly into a TV to show your pictures. It's also a really nice-looking camera that's a little smaller than some other Cybershots and boasts a brushed silver body.

If money is absolutely no object, you



could splash out on the Cybershot DSC-F707, a \$1,799 professional-quality digital camera that offers a five-megapixel picture quality, a 5X optical zoom, 16X digital zoom, 16 MB Memory Stick, colour viewfinder (which is a cross between a traditional viewfinder and the LCD on the back of most digital cameras), and Sony's Hologram AF technology. The idea behind Hologram AF is

that the camera projects a laser hologram pattern onto the scene you are shooting; then uses that pattern to read the contrast between the picture and the subject to achieve the most accurate possible focus. Finally, this high-end camera comes with Sony's InfoLithium M-Type battery, which it claims should give you about 3,000 shots per full charge.

If you don't want to fiddle with cables or Memory Sticks to get your digital pictures on your computer's screen, then Sony's latest Memory lineup may be what you're looking for. Sony has two flavours of Memory these days: one that writes your pictures directly to a standard-sized floppy disk, and another that takes small-size 8 cm CD-Rs or CD-RWs.

The most FD-friendly (i.e., the floppy disk model) is the \$695 MVC-FD200, which offers a respectable two-megapixel picture quality, and 3X zoom. In addition to storing pictures on a floppy disk, this camera has a Memory Stick slot and comes with a USB connector port for firing pictures to your desktop or notebook pretty much any way you like.

Meanwhile, anyone who wants a CD-Memica had better be prepared for a four-figure price tag. The coolest CD-Memica is the MVC-CD400, which will set you back a cool \$1,995. It does, however, take four-megapixel pictures and includes an on-board CD-R drive that writes images to 8 cm 156 MB recordable or rewritable CDs. It also comes with a 2.5-inch LCD on the back for reviewing the pictures you have taken.

Sony has introduced a camera add-on for its Clio handheld (the one based on the Palm OS). The PEGA-MSC1 is a \$249 attachment that fits into the handheld's Memory Stick slot. Like all such hybrid devices, the specifications are not amazing—with 320x240 pixels being the maximum capture size—but it could be a fun add-on for those who want to be able to display pictures on their handheld. For the who suffer from pocket clutter, it would allow them to bring a digital camera with them by merely grabbing their handheld computer. □

Nikon shakes up Coolpix line

Just as we were going to press, we received an announcement from Nikon (www.nikon.ca) of three new models in its Coolpix digital camera line. These include the Coolpix 5700, 4500, Coolpix 1000—five, four, and two-megapixel models respectively.

The 5700 is the new flagship of the Coolpix line. It includes a 5X optical zoom lens made of Nikon's Extra-low Dispersion (ED) glass. Nikon joins other

digicam makers like Fuji Photo, Minolta, and Olympus in adopting an electronic viewfinder system on the 5700.

Like the 5200, it includes a nifty self-timer LCD screen (first seen on Canon's PowerShot line) that allows you to hold the camera above your head or at ground level and still see your own position.

The Coolpix 4500 is an update to the 395, and incorporates the two-piece

self-body design that has become the signature design feature of the Coolpix 900 series. It uses a four-megapixel image sensor and has a 4X optical zoom.

Aimed at revivers, the 1000's message is ease of use, with features like a one-touch image upload system. The Coolpix 2000 uses a 3X optical zoom lens.

Nikon says all three models will be available in July.

—ICF Staff

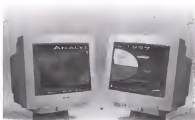


Hands On

Lab Test • Hardware Evaluations • Software & CD-ROM Reviews

The multi-monitor desktop

TCP Lab looks at graphics cards with dual interfaces



Source: Active Graphics Inc.

By Sean Carruthers

Earlier this year at Microsoft's WinHEC 2002 conference in Seattle, one of the final keynote sessions included discussion about ways to "increase desktop size" without having to increase the size of the monitor. A couple of presenters talked about multi-monitor support in Windows and how users can make better use of it.

This month, we'll look at a few of the graphics cards that currently support more than one monitor. These cards cover the full range of applications, from business to games.

This month's test

Our test bench this month was a 2.53 GHz Pentium 4 in an Intel 850-based motherboard (D850EMV2), with 542 MB SDRAM running at 533 MHz. The

Continued on page 35



Visually flat out

A few flat panels

By Sean Carruthers

If you're planning to get more than one monitor on your desktop, chances are you're getting some consideration into a flat panel. Be honest: most of us barely have space on the desktop for one full-sized CRT monitor, let alone two. The multi-monitor setup is definitely one area where flat-panel monitors really shine.

The compactness of a flat panel is, obviously, the biggest point in its favor—when a monitor can be tucked up within a few inches of the wall, it frees up a lot of additional desktop space, and finding room for two is less of a problem than a dual-CRT setup.

That's not the only advantage, though. CRT monitors rack back a fair amount of power, especially when you get into larger displays. The power consumption rating of a 19-inch CRT is typically between 100 and 150 W, while an 18-inch TFT with the same viewing area often checks in at 50 W or less—that means you could potentially get three flat-panel monitors in the same power consumption range as one CRT. (One other practical aspect of

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Soundtrack scoring gets easier

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Also: sound card, CD-ROM drive

By Douglas Alder

Score. Desktop (www.soundtrack.com) claims its SmartSound brand is the world leader in automatic soundtrack creation. What exactly is automatic soundtrack creation? The answer lies in one of the products in the company's SmartSound line: SmartScore Pro. This package is sound-editing software for Mac and Windows that allows video editors to quickly adapt a soundtrack to the tempo and length of an existing video.

SmartScore Pro's video import capability allows you to bring videos into the workspace with or without the audio track, and score them automatically. You



can import a variety of digital video formats—including MPEG, QuickTime, AVI, and DV—then, by previewing the video, quickly adapt a soundtrack to the length and emphasis points. You can also

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down pop up on the screen when you're making adjustments, telling you which input you're on. In fact, a window even popped up when we went to the display resolution setting in Windows, to let us know the monitor's optimal resolution. Very slick. It helps make the LCD1880K a great choice either for the office or the home user, but make sure you save up, because at \$1,949 it's not cheap.

Samsung SyncMaster 181T

From: Samsung Electronics Canada Inc.
www.samsung.ca
Estimated price: \$1,199



Samsung's TFT monitors have been a favorite around the Test Lab—in fact, the SyncMaster 171MP won our first VIP Award, last month—due to a combination of excellent quality and aggressive pricing. This model is also impressive, with a new streamlined design and a large high-quality screen.

The streamlined is in the bezel, which is only 1.8 cm (0.7 in.) wide—a touch wider than the NEC model listed above, but impressive nonetheless. The 18-inch 1,280x1,224 screen also has an excellent viewing angle, 170 degrees both horizontally and vertically (or 85 degrees in any direction).

The 181T is a hybrid, which means it has both DVI and VGA connection onboard, and a switch on the front to flip between the two inputs. (Again, if you're at a weird mood you can hook both up to the same dual-head card and flip between your desktops with the switch.) The base is configurable in three ways: in addition to tilting the monitor back or forwards, it also pivots into portrait mode, and can be raised or lowered. It also has a hole in the bottom of the base so you can tack away your cable clutter.

If you have a few extra dollars set aside for a pair of monitors, this model is certainly a nice choice—it's stylish, high quality, and the dual inputs means you won't have to worry about what kind of connection are on your graphics card. ☐

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Soundtrack scoring gets easier

Continued from page 28

set markers at various points in your video to score just a particular scene.

How it works

The first step to working in SonicPro is importing some video, which can be a small compressed version of your video or the full DV version, as SonicPro Pro accepts a wide variety of video formats. Under the File menu, select Choose Video, which opens a dialogue box for selecting the video from your hard drive.

Next, you select a soundtrack using the Soundtrack Browser (which gives an overview of installed soundtracks) or a window-based approach.

Wizard interface

The wizard interface is called Maestro and is found under the Timeline menu or by clicking the Maestro icon on the main menu bar at the top of the screen. You can also go to Maestro by right-clicking your mouse anywhere on the screen, revealing a menu of the program's most common functions.

Maestro presents a series of screens

which you can click a series of options and end up with a scored soundtrack—within a few minutes even, if you're on a tight deadline. It will be scored as if you had an in-house musician who understood the music to match the action elements and dovetail with the end of your video. No more hide-outs as music that isn't finished.

When the video and Maestro-selected soundtrack is imported, the screen has three main windows: Timeline, Video, and Smart Blocks.

Adding markers

To make finer adjustments, add markers to your timeline using the on-screen buttons, or a menu selection. Once a marker is placed on-screen, it can be moved around by sliding it along the timeline.

It would be nice if you could delete these markers by dragging them off the screen, but it's not that simple. There are a couple of options, however. The first is to go to the Marker Settings menu on-screen under Timeline, select the time of the marker, then delete it. The other is to select the marker, then press the key/command combination appropriate to your OS. Option+mouse click on Mac

OS, or right-mouse-click and select Delete Marker in Windows.

Another editing option is the ability to toggle on the wave display of the soundtrack so you can see visually where it rises and falls. This can be useful for fine editing of the soundtrack in relation to the action on-screen.

Controlling the volume

Tagging Volume displays a set of lines on the timeline that can be used to manipulate the volume of the soundtrack. This feature is useful if, for instance, you want the soundtrack to drop way down for a scene but continue playing in the background.

You can modify the volume on those lines by hitting Command+mouse click (Mac OS) or the Control key (Windows) to create break points in the soundtrack.

SonicPro works by breaking a soundtrack into a series of segments. The computer calls these Smart Blocks. The software adjusts the length of any soundtrack by arranging the blocks in a way that makes musical sense.

It's important to note SonicPro Pro only works its magic with pre-configured music tracks that come in its pro-

prietary format. The review copy I received included two CDs of music, SmartSound Dimensions and The Edge Series, Vol 1. Combined, they give you about 50 different soundtracks included in each can be a number of variations, so you actually get more than 50. By modifying the Smart Blocks you can customize these soundtracks further, but you'll probably use up most of the soundtracks you like quickly and be looking to buy more from the company.

Exporting

When all is said and done, the goal is to get your soundtrack out of the program, either attached to the video or as a soundtrack that can be imported into your video editing program for further tweaking. SonicPro has a variety of export options for both methods.

Conclusion

The program has a number of powerful features, but can be used at a lower level by users who want to create a basic soundtrack with a few clicks of the mouse. But if you need the power to tweak your soundtrack, it's also here.

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< HANDS ON >

Multi-monitor mania

Continued from page 35

versions including the one we tested come with 64 MB, but the 128 MB version should be available at the same price). They also have four rendering pipelines—double that of the mid-range 7500. Oddly, the R300 operates at a slightly slower core clock speed, 275 MHz (the 7500 operates at 290 MHz), but the extra rendering pipelines and the faster RAM speed more than compensate in terms of 3D performance.

The card features pretty good flexibility in terms of your display configuration: both DVI and VGA connectors, a DVI-to-VGA dongle, and an S-Video output to allow you to use a TV or VCR as your second output. Hybridvision allows you to configure your desktop(s) the way you like and be more productive. The card supports resolutions up to 2,048x1,536, at 75 Hz refresh, and up to 200 Hz refresh at resolutions of 1,024x768 or lower. In addition to the ATI Multisync Center, the Radeon R300 also comes with a few game titles (our sample came with a half-full bundle).

As you'd expect from the reinforced rendering pipeline, the R300 certainly does a whole lot better at 3D gaming than the 7500. But the R300 has a fairly substantial price and those looking for a solid business desktop solution will find the 7500 a lot easier on the finances. Those who want the best of both worlds will like this one a lot, though: reasonably good desktop performance, great 3D performance, multi-monitor support, and it still costs a lot less than the high-end GeForce cards.

A note about the pricing: at \$499, the official pricing from ATI is still very high on these products. We've seen them marked down fairly radically at retail, and that we've given a range of reasonable prices, though it should be noted that some stores may have the product listed at full retail. If you're bargain hunting, the 64 MB version is the one most likely to be discounted at this point, so shop around!

Gigabyte Naps AP Radeon R300 Deluxe

from Gigabyte Technology
www.gigabyte.com

Suggested price: \$299

Gigabyte's 64 MB Naps AP is virtually identical to the Radeon R300 apart from slight stylistic and physical design nuances.

Continued on page 38

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```

# Create a new file called test.txt
touch test.txt

# Write some text to the file
echo "Hello World!" > test.txt

# Append more text to the file
echo "This is a test." >> test.txt

# Read the contents of the file
cat test.txt

# Delete the file
rm test.txt

```

B467



KX7-333R



Silver GF4 Ti400

[illegible]

Silvaco GF4 T4000



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Onboard processing (GPU)	Radeon 8500	Radeon AF 8500	3D Prophet 7500	Evil	Millennium	VR4600	Winfast A250	Gal	Maya GeForce
Onboard memory	64 MB SDRAM	64 MB SDRAM	64 MB SDRAM	64 MB SDRAM	32 MB SDRAM	32 MB SDRAM	32 MB SDRAM	32 MB SDRAM	32 MB SDRAM
Max. resolution (pixels)	2,048x1,536	2,048x1,536	2,048x1,536	2,048x1,536	2,048x1,536	2,048x1,536	2,048x1,536	2,048x1,536	2,048x1,536
Max. refresh rate (Hz)	300	300	300	300	240	240	240	240	240
AGP bus speed	4x/2x	4x/2x	4x/2x	4x/2x	4x/2x	4x/2x	4x/2x	4x/2x	4x/2x
VGA connector (D 5-pin)	yes	yes	yes	yes	yes	yes	yes	yes	yes
DVI connector (D 15-pin)	yes	yes	yes	yes	yes	yes	yes	yes	yes
DVI-to-AGP bridge	yes	yes	no	yes	yes	no	yes	yes	no
S-video output	yes	yes	yes	yes	yes	yes	yes	yes	yes
S-video input	no	no	no	no	no	no	no	yes	yes
S-video-to-composite bridge	yes	yes	yes	yes	yes	yes	yes	yes	yes

Windows compatibility (out of box)

32-bit	95, 98, ME	95, 98, ME	95, 98, ME	95, 98, ME	95, 98, ME	95, 98, ME	95, 98, ME	95, 98, ME	95, 98, ME
64-bit	NT, 2000, XP	NT, 2000, XP	2000, XP	NT, 2000, XP	NT, 2000, XP	NT, 2000, XP	NT, 2000, XP	NT, 2000, XP	NT, 2000, XP

Other OS compatibility (out of box)

Linux	2.0.33	2.0.33	2.0.33	2.0.33	2.0.33	2.0.33	2.0.33	2.0.33	2.0.33
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ATI mark 2002-Feature 4

Direct Content creation	yes	yes	yes	yes	yes	yes	yes	yes	yes
Open GL	yes	yes	yes	yes	yes	yes	yes	yes	yes
DirectX 8.0	yes	yes	yes	yes	yes	yes	yes	yes	yes

Estimated price	\$150 to \$450	\$200	\$250	\$250	\$150	\$150	\$200	\$200	\$200
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* The display card can be used in a 2D mode when the video processor

What's new in this issue

Continued from page 35

in addition to being bright red (a bit of an irony as ATI's logo is bright red but its own cards are black, circuit-board green). The Galaxy card also features creative heat sinks on both sides of the card—however even then, ATI's, and probably overkill, but it certainly looks cool (you



needed). The card runs at the full 273 MHz core clock speed.

The card ships with an S-Video-to-VGA device, as well as the DVI-to-VGA device, so you can configure your display to your satisfaction. A big part of the value here comes from the software bundle: in addition to the drivers and utilities, it has a fairly good game bundle (Duke3D, Sam, Zone, Heavy Metal

FAKKE, Mortar, and more) and CyberLink Power2Go movie playback software.

The most interesting feature for the computer enthusiast will be the V-view software, which allows you to tweak the hardware settings of your Vega card. The application gives you control over the core and memory clock speeds, as

Continued on page 40

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Multi-monitor trailblazers

While there has been multi-monitor support within the Windows OSes since Windows 95, there wasn't a wide variety of consumer-level multi-display cards available. The first company to start pushing "dual-head" display in this segment was Canada's own Matrox Graphics, with the G200 series of cards. These cards allowed you to hook up two VGA displays, and featured software for viewing a single window across two monitors.

When the Matrox cards were introduced, they revolutionized the graphics card market, but were quickly overshadowed by a different revolution: the integrated 3D card. Previously, the 3D and 2D components of the PC display were on separate cards and required a patch-through, but a number of companies were beginning to integrate both into the same card for better performance.

While the Matrox cards certainly held their own in the 2D department, the 2D/3D cards pulled away in terms of gaming performance. The only issue, though: if you wanted to run more than one monitor, you had to install two separate graphics cards (typically one on the AGP bus and the other on PCI).

That changed with the introduction of

ATI's Radeon VE. Though the Radeon VE wasn't the fastest-performing 3D card, it was acceptable to most users who wanted to play the occasional game; additionally, it featured connections for two monitors (one DVI and one VGA), and allowed those monitors to be separate displays.

Some cards running nVidia graphics processors featured both connectors, but it was an either/or choice, and if you plugged a monitor into both, it would default to only one of them. The dual-monitor functionality continued on many subsequent models of the Radeon, but those looking for top 3D gaming performance would still have to use two separate cards in order to use two monitors without sacrificing 3D performance.

At the beginning of 2002, nVidia finally introduced multi-monitor support in its GeForce lineup, which meant you no longer had to choose between gaming performance and multi-monitor capability; the only catch you had to pay for the privilege.

The highest-end GeForce4 cards with multi-monitor support are still between \$400 and \$600 in a lot of cases, which is not exactly spare change.

—Sean Connolly

Multi-monitor mania

Continued from page 42

compare one to another. This can be very handy when checking spreadsheets or graphs.

The GeForce comes in two major flavors right now: Ti and MX. MX is the lower-end version and is based on the older and slower GeForce hardware. It typically only allows you multi-display capability using one monitor and one S-Video output. The Ti series (identical to Titanium) is much more powerful, and most of the cards we've seen let you do multi-monitor configurations right out of the box. We've chosen to look at the Ti cards this month for that reason.

Asus Video Ultra
from: Auretek Computer Inc.
www.asus.com
Estimated price: \$209



We're rarely disappointed when we get to look at Asus graphics cards, and this card doesn't break that trend. This purple card features the powerful Ti 4600 GPU, and comes with 128 MB of onboard memory. Compared to heatinks based on some of the other Ti 4600 boards, the one included here is fairly restrained, with a compact design and a fish painted on the top. That didn't stop the card from turning in the best desktop application numbers and a reasonably good 3D

score, too.

The card features the standard outputs on Ti-level cards: DVI, VGA, and S-Video out. The package ships with a DVI-to-VGA/DVI dongle (though you can only use one of the outputs on the dongle at a time) and an S-Video-to-composite adapter for use with older video technology. The software bundle includes AsusDVD 2000, Aquagem, Midnight GLE, and more.

If you're looking for something that's nearly as powerful but not quite as expensive, you may want to cast your gaze on the Asus V8440, which uses the Ti 4400 GPU but otherwise has the same features. The scores were close, but the V8440 will be available for around \$450, a good savings.

Thanks to 3Dconnexion (www.3dconnex.com) for the loan of the Asus samples

Leadtek Winfast A256 Ultra TD
from: Leadtek Research Inc.
www.leadtek.com
Estimated price: \$209



We may as well say it right off the bat: Leadtek makes cards that look incredibly impressive. The first thing you notice when taking an A230 series card out of the box is the gigantic heatsink, which wraps around both sides of the card. Look closer and you'll see the two cooling fans peek out from the heatsink, both of which have special EMI-shielding over

the fan to prevent junk from clogging up the blades and motor. (This is probably the best idea we've seen for any device with a cooling fan—no matter how close you keep your house, chances are dust will find its way into the guts of your computer.) The heat sink must be doing something right, because the

Leadtek card gave us the best 3D performance of the bunch, and the desktop application side was right up there, too.

The card comes with DVI and VGA connectors on board, as well as S-Video out. While there are S-Video, composite and S-Video-to-composite cables

Continued on page 46

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E-business prospects 'bright'

Continued from page 32

things, and you don't want to think about it the next morning."

Carroll condenses the type that helped float the investment down Internet balloons. "There were far too many people in the dotcoms who were

"The media has gone from unrealistic optimism to unrealistic pessimism" about technology, Carroll says.

"It's like a hangover—you went to a party, you did a lot of silly things, and you don't want to think about it the next morning."

drawn entirely by greed. They were here, and didn't want to invest the years of hard work needed to create a real business."

Although the reality check has been

pretty harsh, Carroll thinks it has resulted in a more supportable climate for the companies that remain in the game. "The idiots have left the building," Carroll jokes.

The companies with real products and real customers are still in business and many are learning to use the Internet cost-effectively, he makes it a point to say. According to Carroll, these viable uses of the Internet include customer support; competitive business intelligence; research and knowledge management; streamlining cost structures in ordering, inventory, and sales; business communications, collaboration, and mobile work; employee education and training; recruiting and marketing and merchandising.

The difference between shopping and buying is one way to understand what the Internet is good for, he says. "People are going to shop on the Web, to more efficiently find something that they may then want to buy in the real world. For example, I went online to find some summer camps for the kids. I quickly found five good ones, and then contacted them for more information, which

allowed me to make a final decision. The Internet is perfect for that."

According to Carroll, any size business can make impressive yet smart use of the Internet. "How a small business can

do it [give Web presence] is to create a simple Web site, by having a pro do the basic layout and pages, using a standard Web development package like

Continued on page 32

What is Smart Toronto?

Smart Toronto (www.smarttoronto.ca) is a member-run organization that allows individuals and representatives of many public and private organizations in the greater Toronto area (or so-called Toronto Technology Region) to meet and network with others involved or interested in technology.

The group's activities include educational and informative seminars on new technology, promotion of Toronto as a world centre for technology and business investment, and consultation with different levels of government on matters of business and technology policy and legislation.

Smart Toronto charges a fee for membership based on the size of the company or organization, and offers regular seminars and events to allow members to meet and to have access to industry experts and government representatives.

Other organizations that want to promote the more effective use of technology and develop business to business, business to government, or educational or social agency contacts include:

- Informative Technology Association of Canada (ITAC), www.itac.ca
- City Multimedia in Montreal, www.citymultimedia.com
- Canadian Advanced Technology Alliance (CATIA), www.catia.ca
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—Jeff Dorris



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Project 2002 diversified*Continued from page 30*

act's traditional customer, and Project Professional is aimed directly at them.

The second audience is the general business manager who, though not a project manager by title, works on projects day to day.

A good example is a marketing campaign. These managers may be new to using this category of software, so Microsoft has added new tools to Project 2002 to guide new users through the steps of planning and managing a project.

This audience could include small to medium-sized businesses, which may in the past have found project management software had too steep a learning curve to be worth implementing. Microsoft Project Standard is aimed to the smallest companies, while a combination of Project Professional and Project Server could meet the needs of slightly larger organizations.

Finally, the third group of core customers Microsoft is targeting with this release is executives who need a high-level view of their organization's project portfolio and the ability to analyze that data easily. Project Web Access is made for this group to access Microsoft Project information; these users need a \$275 Microsoft Project Server Client Access license rather than a full version of Project.

Gale's app managers with a Project Web Access license will be able to look at portfolio and resource management, real-time reporting, and scenario analysis, which allows them to create "what if?" scenarios for projects.

If there was one tool in the entire offering that really appeals to the small business or company, it would probably be the help tool called Project Guide, which is supposed to help business managers dynamically plan, track, and manage schedules and resources.

Gale explains that it lets users create project templates, and includes some "canned" templates for common

tasks that walk users through the process of creating a new project, assigning resources, working back from completion dates, and so on.

You'll also want to keep one particular licensing issue in mind: any customer who obtains maintenance on an earlier version of Microsoft Project by July 31, will have the option of upgrading to Microsoft Project Standard 2002 or Microsoft Project Professional 2002 and will receive a free copy of Microsoft Project Server. □

9-11: a bibliography

9-11: This site is an interactive effort by Kevin D. Hoots of the Oklahoma Department of Libraries to provide a bibliography of U.S. federal documents pertaining to the Sept. 11 attacks. Many (though not all) of the documents are online, making this a kind of portal into the U.S. response to the attacks on the World Trade Center and Pentagon. The material is sorted both by topic and alphabetically.

www.ode-lib.org/911/home/911.htm

A mouse for your Palm PDA

For those tired of navigating their Palm device with a stylus, accessory vendor Intego (www.intego.com) has unveiled the PDA Mouse—a "stick-on" mouse that gives users full cursor control of their Palm OS-based PDA. It utilizes built-in hot key functions and a control bar, eliminating the need to use a stylus.

According to Intego, setup involves simply pressing the PDA Mouse onto the Palm device and syncing it with the desktop PC to install the necessary driver software. The mouse can be used alone or in combination with a PDA keyboard.

The PDA Mouse is compatible with all handhelds running Palm OS 3.0 or higher, including devices from Palm, Handspring, IBM, Sony, and Hands. It is priced at US\$19.99, and comes with a one-year warranty.

—JCP Staff

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Outlook Journal



Probably the least understood module in Microsoft's Outlook is its Journal, which contains a wealth of tools for tracking what you do each day. Much of this can be set up so it records automatically. Then, when you need information about what you've done and how long it has taken to do it, it's at your fingertips. This month, we'll look at the Outlook Journal and its uses.



Outlook's Journal can automatically record a variety of information, including work on Office documents.

The Journal tool, an option in the Outlook folder list, appears as a button in the Outlook Startout toolbar in Outlook 98 and on the My Shortcuts list in Outlook 2000 and 2002. It can record a lot about what you do on Outlook and in Microsoft Office programs. For example, you can set it up to track all the office

documents you work on. If you remember that you worked on a Word document last Wednesday but can't remember what it was, the Journal can tell you.

The Journal is set up, by default, to record some items automatically. It can also be customized to record more items and items for select contacts. In essence, you tell it what to do and it chugs along in the background, recording information even when you're not running Outlook. In this situation, Journal data is stored in a file that updates Outlook the next time it's launched. This can take some time if there has been a lot of activity recorded, so there may be a slight delay on start-up.

Viewing Journal entries

To see the Journal, click the My Shortcuts option in the Outlook Bar and choose Journal. You can switch Journal views by choosing View/Current View, then selecting an option. The By Type option shows Journal entries in a timeline view and grouped by the type of entry—you'll see records of emails, Office files, and more listed here. Choose the By Contact view to see the entries listed by the Contact they relate to. While these two are the most useful, you can also use the By Category view to see the items grouped by categories you've assigned. Phone Calls view shows the phone calls you've logged, and the Last Seven Days and Entry List views are simple daily views with each entry listed in a row under a series of column headings such as Entry Type, Subject, Start, and Duration.

You can change the look of any of these views by choosing View, Current View, then Customize Current View. Here you can add or remove fields from the view and change the sort order and the grouping of items. You can also change the way the data is formatted.

When viewing your Journal, double-click any of the items to look at them. Depending on how the Journal is set up, double-clicking an item may open a Journal dialogue with the item attached or the item itself. If it opens the former, you simply double-click the attachment icon to view the original document. If this is an Office file, for example, the appropriate Office program will open and the document will open for you to view it or work on it.

When viewing the Journal in any of the timeline views, the Standard Toolbar will display the buttons you more typically associate with the Calendar, Go To Today, Day, Week, and Month. Click any of these buttons to vary the amount of the timeline that is visible—click Day, for example, to view today's entries only, or click Week to show seven days at a time.

In any of these views, you can also click the Preview Rate button on the Advanced toolbar to view the contents of any Journal entry you select in the time line or table view in a resizable window at the foot of the screen.

Automatic Journaling

Many actions can be added to the Journal automatically and to see what the Journal

is currently recording and to vary those, choose Tools, Options, then the Preferences tab (Journal tab in Outlook 97), and click the Journal Options button. Here you can see the items that are currently being recorded to the Journal—any with a tick mark against them. You can also the Office programs from which items are being recorded: Access, Excel, PowerPoint, and Word will appear here, as well as programs like Visio if you have them installed.

Records of when you worked on these files will be kept in the Outlook Journal even if you move or delete files. If this is the case, you won't be able to open them from the Journal, but a record of file names, original locations, and time spent working on them will be kept.

The list in the top-right of the dialogue displays the contacts from your default contacts folder. You can select any or all of these to track, too. You can't specify different items for different contacts though, and whatever items are selected in the top-left window will be those that are recorded for all contacts. Once this dialogue is set up, the items you're interested will be recorded even when Outlook isn't open.

Manual Journaling

In addition to having Outlook automatically record items, you can add items to the Journal manually. For example, you can record items for contacts that can't be added automatically, such as items

Continued on page 58

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Outlook Journal

Continued from page 35

relating to contacts not in your default Contacts folder, or where you're sending email to a contact using an address that is different from their primary email address. You can also add manual entries for areas that occur outside Outlook's scope, such as letters you receive, phone messages, and incoming phone calls.

One way to do this is from the Journal itself: open the Journal tool and choose

File then New Journal Entry (or Actions then New Journal Entry). The Journal Entry dialog box will open and you can type the journal details, including a descriptive subject and notes in the text area. You can select an entry type from the drop-down list of types, choose a Contact (or two) related to the item, and assign it to any of your categories.

One use for this tool is to record the time and details of unscheduled meetings or other talks—use those as a record of the meeting and use the time details

for billing purposes if you account to your clients for the time spent on the phone to them or on their behalf.

In this situation, open the Journal Entry dialog box and choose Meeting from the Entry type list. Click the Start Timer button when the meeting begins and take notes during it using the text area on the screen. When the meeting is over, click the Pause Timer button and save your entry—that's all there is to it. You can print your Journal entry as you have a paper copy for your client file.

If you want to add time to an entry later on, you can open the entry and click the Start Timer button again—this will start the timer running, and the time will be added to what was already recorded for this item—click Pause Timer, Save, then Close to save the new time to the entry.

Another way to create a Journal entry is using drag and drop. Simply pick up any Outlook item (an email message or appointment, for example) and drag it onto the Journal folder in your folders.

Continued on page 69

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Liberty Village New Media Centre looks beyond Toronto

By Ben Venuti

If I had a nickel for every time I heard that the dot-com bubble was blowing up, the death knell for the new media industry, I'd be a rich woman," says Katherine Brown, executive director of Toronto-based Liberty Village New Media Centre (LVNMC).

"The fact of the matter is that new media companies were doing good work before the bubble and there are new media companies out there that are continuing to do good work and are growing and building the industry even now after the bubble."

Toronto-based Delmona Inc. released its third annual Interactive Media Producers Survey and found that the estimated gross revenues for the interactive media industry in Canada for 2000 came to \$1.1 billion, a three percent increase over 1999. And, despite recent problems in the economy, some 60 percent of the nearly 300 Canadian new media companies surveyed said they achieved more than \$100,000 in revenue and employee productivity. Many of the companies had also made significant inroads into the United States, and about one quarter reported that they had forged significant international alliances that helped them open broader markets.

Adam Iannini, president and chief executive officer of Delmona, says that while the dot-com bubble burst and technology sector crash really did shake some of the companies that did not have sound business models, it did have a very poor understanding of how Canadian customers wanted to use new media.

"The companies that survived were ones that were not focused on one specific technology or industry," Iannini adds. "They were more diversified and flexible and could provide what people were looking for—which were real and useful business solutions."

National goal setting

If there is a continuing problem with the new media market in Canada, Iannini suggests, it is the difficulty companies are having in learning to work together in order to prove the Canadian new media market and to promote their advice.

Iannini says the new media market is made up of a lot of smaller players who tend to be "less supportive of initiatives and other programs that can help them."

LVNMC's Brown says that the centre will soon begin rolling out several new initiatives that will see it become more financially independent and less Toronto-centric in an effort to play a greater role across Canada.

The centre wants to help coordinate the various new media organizations and support groups across the country in order to give the industry a more focused voice and help them make better use of the financial and technical resources.

"A lot of new media groups across Canada have been talking for some time about some kind of coordinating effort," Brown adds. "Things are extremely fragmented and when you have many different organizations going after the same funding, sponsors, and so forth, there tends to be a lot of cannibalization. What we would like to see is a greater

degree of coordination between the different groups in order to cut down on the overlap and to better help each other. Right now, there is no other organization out there in the new media space that is as well positioned as the LVNMC. We have a physical space, physical and virtual infrastructure, and we have a very good model for operating."

One of the centre's recent efforts in linking Canadian new media companies closer together and to raise their profile was its sponsorship of the Canadian New Media Awards, held in late May. Fifty individuals and companies from across Canada were nominated in 12 categories.

Some of the companies nominated for company of the year were Halifax-based Colliedance Digital Productions, a convergence and interactive television production company; Calgary-based Critical Mass, a developer of interactive products; and Vancouver-based Radical Entertainment, a developer of interactive entertainment.

James Brown, partner and chief executive of Winnipeg-based Frantic Film says he is flattered to be nominated in the new media economy category and that his company was recognized for the visual effects work it has done for television, commercials, and film. Some of the company's most recent visual effects work was for the movie *Swordfish*. Currently, it is working on the visual effects for the X-Files movie sequel.

Brown adds that what makes his company unique is that it has developed a secure Web site where movie makers can go to view the daily rushes and the effects work being done for them by

Frantic Film. This offers real-time feedback from the film makers.

"This allows us to do high-quality film work without having to be in Los Angeles."

Brown says he is glad to be an organization like LVNMC trying to bring the players in the Canadian new media market closer together, under any effort to improve the communications and coordination between new media companies can only be beneficial.

"It's a big fan of networking and I'm on the board of a lot of organizations that help promote and advocate our business," Brown continues. "And I'm more than happy to support any new initiative that helps promote new media in Canada."

The LVNMC was launched in 2000 as a non-profit business and marketing hub that offered a variety of technical and business support services to new media companies in Toronto. It was started after a Toronto New Media World study by PricewaterhouseCoopers LLP estimated that the city could be losing as much as \$3 billion in new media revenue due to a lack of coordination and cooperation between the nearly 400 new media companies in and around Toronto.

Some of the services the centre created to tackle this problem included meeting and event facilities, access to a virtual business network Web site, production of executive seminars and workshops to help with ongoing management, marketing, and financing issues, and referrals to other new media companies and clients in Toronto and across Ontario. □

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Processor Wars

Via hits the road with Eden

By Sean Connolly

Every so often, Via Technologies (www.via.com.tw) puts on a tour known as the Via Road Show, which is designed to show off its new technologies to both resellers and the media. The company recently rolled through Canada with a few new things to talk about.

P4C333 hits ground running (fast)

If there's one thing Via is known for, it would be chipsets, the little bits of silicon that allow the processors to communicate with the memory and expansion slots, among other things. Via recently gave us a bit of press for revealing the new use of the industry heavyweights, Intel, by introducing the P4C333 chipset, which brought DDR memory support to the Pentium 4 processor without Intel's sanction. The company followed up with the announcement of the P4C333 chipset in March, and motherboard with the new chipset are now rolling off the Via Platform Solution Division manufacturing line.

The P4C333 is the first, with three slots for DDR333 memory, onboard ATA133 RAID, six USB 2.0 ports, five PCI slots, and one CNR slot. The P4C333



board, which follows shortly after the P4P8, owns the RAID, but adds both Ethernet and FireWire ports. The P4P8 Pro is also expected to follow, which will increase the number of USB ports to 10, add Ethernet, and one extra PCI slot.

A future chipset, dubbed P4C600, is currently on the drawing board, and will be an interim step between Via's current generation of DDR-compatible boards and the motherboard that will support the forthcoming DDR 2 specification.

Via C3 processor steps up

In addition to chipset, Via also continues to market its own C3 processor, a CPU that builds on the technology Via acquired when it swallowed up Cyrix. It is a low-power processor designed for

for performance than for efficiency and affordability, and it will go up against the Intel Celeron and AMD Duron market. The processor is currently available at speeds up to 933 MHz, with 1 GB and 1.1 GB models expected to follow very soon. The next-generation version of the C3, codenamed Nehemiah, is expected out in the third quarter of 2003, and is currently predicted to range between 1.2 GHz and 1.5 GHz.

One of the key selling points of the C3 is the fact that it uses the Socket 370 interface, which makes it compatible with a good chunk of the motherboards currently being used for Celeron or Pentium III processors. This will become even more important in the immediate future as Intel transitions to Celeron line to the Socket 478 form factor (the same interface it uses for Pentium 4). This means people with older motherboards may find that the C3 provides a much cheaper and less costly upgrade path when the old processor just doesn't cut it any more.

As with earlier versions of the processor, the C3 assumes Level-1 over Level-2 cache (128KB of Level-2, 64KB of Level-1).

Continued on page 67

The usual suspects: AMD, Intel



By Sean Connolly

As usual, both Intel and AMD have processor news this month, so let's get right to it.

Celeron takes a new shape

Though it initially earned a lot of scorn with the release of its first Celeron, Intel has evolved this processor from a no-cache underperformer into a fully-powered little processor. After the transition

Continued on page 66

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The usual suspects: AMD, Intel
Continued from page 64

of the Pentium line from the Socket 370 Pentium III to the Socket 433 Pentium 4, the Celeron was left as the CPU of choice for those with Socket 370 boards. That's about to change.

The new Celeron is now moving over to the Socket 478 interface, which is what the Pentium 4 adopted shortly after its introduction. This move will put all of Intel's mainstream chips onto a single form factor, making CPU-and-board compatibility less of an issue than it's been over the past year or so. (It's the value and higher-end desktops will be able to use the same motherboards, regardless of the choice of Intel processor.)

This will also give Via an opportunity to gain a greater share of the value segment of the market, as the C3 processor can step into the Socket 370 slots left open by the Celeron's migration.

Two new versions of the Celeron have been introduced, including a 1.7 GHz model that runs on a 100 MHz bus, same as the early models of the Pentium 4 (this is not truly a big transition, as the

newer Celeron already ran on a 900 MHz bus, and this new speed is really just 100 MHz quad-pumped). This Celeron will cost US\$83 in 1,000-unit quantities.

A slower version, at 1.4 GHz, is also being introduced, but this one is designed to run on a 100 MHz bus and features a 0.13-micron manufacturing process. For this reason, the 1.4 GHz costs a bit more, at US\$89 in quantities of 1,000, but the move to the smaller process should actually boost the speed somewhat and make the processor run cooler.

PC1066 SDRAM ships

Though it's gotten a bad rap in many places, Rambus' SDRAM technology can claim to provide an alternative to SDRAM and DDR SDRAM memory when it was first brought to the market. SDRAM was exceptionally expensive and didn't provide the breakthrough performance. Rambus was initially claiming, in fact, SDRAM not only didn't provide markedly better performance than the cheaper mainstream memory modules, it was sometimes outperformed by these cheaper components.

When the benchmarking numbers started coming in, the boosters of SDRAM claimed SDRAM wouldn't show off its benefits until higher clock speeds emerged—and they may well be right. On recent batch of testing with new Pentium 4 processors teamed up with SDRAM showed much better performance than similarly configured Pentium 4 systems using SDRAM or DDR.

Previously, the highest performance SDRAM was PC800, which was optimized for use on a 400 MHz front-side bus. The new Pentium 4 processors, however, can use a 533 MHz bus, which lead to the need for SDRAM modules with more throughput; say hello to PC1066 SDRAM modules. We recently received PC1066 samples from Kingston Technology (www.kingston.com).

We did a run with our standard system application benchmark, BAPCo's SYSmark 2002 (see www.bapco.com for details).

The test system consisted of an Intel D855MV motherboard teamed up with a 1.5 GHz Pentium 4 processor, a 54 MB/ATi Radeon 8500 graphics card, and a 30 GB IDE hard drive. We bench-

marked the system twice, first with 512 MB of PC800 SDRAM, then with the same amount of PC1066 SDRAM.

Benchmark test	PC800	PC1066
Internet content creation	519	581
Office productivity	377	387
3Dmark 2002	245	250

While the difference isn't dramatic, it's certainly a nice little kink up the performance ladder, gaining an even 10 points in each category. You can expect PC1066 modules to hit the street at a price point just a few percent above that of SDRAM modules have been any indication, but with the more aggressive pricing structure Rambus has been pursuing, it's possible we may be surprised.

AMD vs. Intel, part 324

For the longest time, AMD and Intel were running neck and neck in our system benchmarking, even though AMD's processors were running at slower clock speeds and checked in at lower price points. With more recent processors, Intel's Pentium 4 has taken a pretty commanding lead in terms of raw power.

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Jaguar a major OS X update

Quartz Extreme transfers GUI workload to graphics card

At the World Wide Developers Conference (May 8 to 10, in San Jose, Calif.), Apple showed off the first in-depth preview of the next Mac OS X update, code-named **Jaguar**. Shown were many new features that had never been mentioned publicly prior to the conference. For many users the most exciting feature in this update will be QuickTime 6.0 and Quartz Extreme video acceleration.

QuickTime 6.0, which Apple previewed several months ago, will make its

debut in OS 10.2 (at this time, Apple has not announced plans to release QuickTime 6.0 for OS 9 or earlier). The newest version of QuickTime includes a complete MPEG decoding and encoding system, as well as full support for MPEG 1 and 2 in any QuickTime application. Apple has previously said it would not release QuickTime 6.0 until MPEG 4 licensing issues had been resolved, but no avenue was made of this during the conference.

The next big feature, Quartz Extreme, is the layer of system software in OS X that draws everything you see on screen. Quartz Extreme is a very exciting new technology that significantly speeds up the system by offloading the burden of the Aqua graphical user interface (GUI) to the graphics card. The video card requirements to run Quartz Extreme are high, with a minimum of 2X AGP and an ATI Radeon or nVidia GeForce 2MX or higher required. Apple recommends 32 MB of VRAM for optimal performance, but the 16 MB chips in some Titanium PowerBook and

iBook models are also said to work.

Quartz Extreme works its magic by sending all the Aqua objects on screen to the video card as OpenGL elements, at which point the card can perform transparency, scaling, and shadows more quickly than can the main CPU. This frees up the CPU for other applications so both the GUI and all your apps will run faster than under 10.1.

All currently shipping Apple systems will support Quartz Extreme. However, even if your Mac doesn't support Quartz Extreme, you'll be able to run OS 10.2 and should still notice a speed increase over 10.1 due to more efficient compiling and many updated system libraries.

Other features in 10.2 will include InkWell handwriting recognition (an updated version of the system used on the Newton PDA), a Sherlock update, and a new instant messaging client co-developed by Apple and AOL, called iChat.

Jaguar will also see the return of a few features from OS 9, including spring-loaded folders and USB printer sharing. Apple has announced that OS 10.2 will be available by "late summer," but has not indicated what the price tag will be. Due to the complexity of the update, it will not be available as a download and will require a new OS X CD to install. For more info, Apple has set up a page at www.apple.com/macosx/updates/ that covers most of the new features.

A Mac rack-mounted server

This month, Apple has announced it's entering the rack-mounted server market. Previously, Apple servers were just PowerMac towers with a hand-dug cavity



of AppleShare IP or OS X Server. Its new product, the XServe, is an entirely new machine that doesn't share any compo-

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Continued from page 46

ments with the currently shipping PowerMac.

The Xserve boasts some impressive specs with dual 1 GHz G4 CPUs, 256 KB on-chip level-2 cache, 2 MB DOR Level-3 cache, and new 266 MHz DOR main memory. The Xserve is the first Mac to use DOR memory and it can hold up to 2 GB of RAM in its four slots. DOR memory runs at double the system bus and allows for much greater memory bandwidth.

With regards to storage, the Xserve is well equipped, with room for four external ATA drives, each on its own dedicated ATA100 controller. With built-in RAID software, the Xserve can achieve better than SCSI access speeds while allowing for greater capacity, since ATA drives are both cheaper and available in larger capacity than SCSI hard drives.

Using four 120 GB drives, a single Xserve can hold 480 GB—or 3 or 4 TB (terabytes)—of data.

The Xserve contains everything you'd expect on a Mac server including two Gigabit Ethernet ports, three FireWire

and two USB ports, a CD-ROM drive for installing software updates, and two 64-bit MHz PCI slots. The four drives and two fans in the Xserve are all hot swappable without the need to shut down the server, and the server's hardware can be monitored remotely over TCP/IP using included OS X Administration Tools.

All five power PCs in an industry-standard 1U rack mount enclosure—4 1644 7x21 cm (1 7x17 6x28 in.) A standard 344 mm (13 5/8 in.) high 42U rack could hold 42 Xserve Macs, running a total of 84 processors at 630 gigaflops and up to 20 TB of storage. On hand for the Xserve announcement, software developer Oracle (www.oracle.com) announced it will be bringing its Oracle 9i server software to OS X, making the Xserve much more attractive to enterprise customers.

Prices for the Xserve start at US\$2,999 for a single 1 GHz CPU, with 256 MB DOR RAM, and 60 GB hard drive. The US\$3,999 model includes dual 1 GHz CPUs, with 512 MB DOR RAM, and a 68 GB hard drive.

Both are expected to ship in June. Xserve can also be configured to your

specifications via the build-to-order section of Apple's online store.

Apple releases iPhoto 1.1 update

The first update to iPhoto—version 1.1—is now available, and while it's mostly a bug fix release, it does add some new features. The biggest change is in the editing section, which now allows you to adjust brightness and contrast from within iPhoto.

Apple has also added new ways to share and view photos, including a function to email photos from within iPhoto using OS X's built-in email client. Another

break-in option allows you to set any of your photos as your desktop background and to create a custom screen saver using any of your albums.

Obviously there aren't enough changes to warrant a version 2.0 release, but if you're using iPhoto 1.0, you should definitely upgrade to 1.1 because it's much more stable and also seems to run faster where you have a large number of photos in your library.

New iBooks get speed, video boost

A month after releasing PowerBook G4s with faster clock speeds, Apple has bumped up the speed on its consumer notebook line.

The new iBooks run at 600 MHz and 700 MHz depending on the model, which is up 100 MHz from the previous models. The new iBooks also feature a 100 MHz system bus across the board—previously the low-end of the line had a 66 MHz bus.

The latest iBooks are powered by a newer version of the PowerPC G3 chip that allows for 32KB of on-chip Level-2 cache mounting at a cost



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to one ratio with the CPU—the double the 256KB cache of previous models.

The only other significant change is to the graphics chip department, where Apple has finally gotten rid of the last ATI Rage 128. Macs in its lineup that chipset had been around in various iterations since the blue and white G3 towers, so it's good to see it replaced with the faster ATI Radeon Mobility chip. That is the same video card used in the PowerBook G4 500 MHz and 667 MHz models last year, though current PowerBook G4s use an updated ATI Radeon 7500 chip that is even faster and sports 32 MB of VRAM.

Still, with 16 MB of VRAM, the iBook has twice the memory of the old Rage 128 5 MB chip set, and in SD performance, it should be more than twice as fast. Also of note: now that these new iBooks use the Radeon mobility chip on a XE AGP bus, they'll be able to make take advantage of OS 10.5's Quartz Extreme. The previous iBooks were the only shipping Mac models that did not meet the minimum requirements for Quartz Extreme, so it's no surprise they have been upgraded prior to 10.5's release.

In most other ways these new iBooks

are the same as previous models, with one FireWire and two USB ports 10/100 Ethernet, 56Kbps modem, video monitoring, and Audio out. One minor change is that with the new Apple video adapter (sold separately for USB), you will be able to connect to composite and S-Video devices (previous iBooks had composite output only). The weight, size, screen dimensions, and resolution are the same as previous models.

Prices are the same as the models they replace, starting at \$1,299 for a 600 MHz, 12.1-inch model with a CD-ROM drive, \$1,399 for a 700 MHz, 12.1-inch model with a DVD/CD-RW drive, and \$2,299 for a 700 MHz, 14.1-inch model with a DVD/CD-RW drive. Both 12.1-inch models come with 128 MB PC100 RAM and 30 GB ATA hard disks, while the 14.1-inch model comes with 256 MB PC100 RAM and a 30 GB ATA drive. The maximum RAM in each machine is 640 MB, and there is now a 40 GB hard drive available as a build-to-order option from the Apple store. ☐

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The usual suspects: AMD, Intel

Continued from page 65

however.

We tested a 2.53 GHz Pentium 4 processor on the Intel D835MV motherboard and 512 MB of PC2000 SDRAM, with a 128 MB Leadtek A250 Ultra TD graphics card. The Athlon XP 2100+ (which runs at 1.75 GHz) ran in a Gigabyte GA-7V80 board with 512 MB of PC2700 DDR SDRAM, and the same graphics card.

	AMD Athlon XP 2100+	Intel Pentium 4
Frequency	1.75	2.53
Price	\$553.00	\$549.00
Integer context creation	2.8	3.0
Office productivity	156	150
System 2000	84	148
Processor index		
Office (point/second)	6063	6063
Price/index		
Office (point/second)	\$1,214	\$1,672

While it's clear the Pentium is generating some pretty impressive performance

numbers, what's interesting is what each processor does with what it has. Though the AMD lags in actual performance, it's actually doing slightly more with each megahertz it has.

The Athlon XP also costs slightly less per performance point, though the difference between the two is clear enough to call even. Of course, that's with the system configurations as detailed above, and the numbers most certainly would change with different components. The point is, raw benchmarking numbers don't tell the whole story. In terms of relative performance, we'd go so far as to say the processors are pretty evenly matched.

It will be interesting to see how the next generation of AMD processors stack up, both in terms of raw and relative performance.

The current generation of Athlon XP CPUs are still fabricated using a 90-nm process, whereas the Pentium 4 processors have already moved to the more efficient 130-nm process. When the Athlon XP migrates to the 130-nm Thoroughbred core, it's possible that the raw power race will pick up right where it left off. ☐

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text, choose Format, Borders and Shading, then select the Borders tab. Click None at the left of the dialog, then, in the preview area, click the left border to turn the left border on. Ensure the Apply to area shows Paragraph. Choose Options and increase the Left setting to around 10 pt to set the spacing between the line and the text.

Quick Font resize • Select the text to change the font size of and click Control + | or Control +] to increase or decrease the font size by one point at a time.

Alternatively, use Control + > and Control + < to increase or decrease the font size to the next value as shown in the Font Size dropdown list.

Use hyperlink formatting • If you're sick of Word forwarding e-mail and Web addresses as hyperlinks, you can stop it in Word 2002 by clicking the Smart Tag icon that appears by the changed link and choose Undo Hyperlink from the Smart Tag menu (or choose Stop Automatically Creating Hyperlinks to disable this feature).

—Peter Bradley

Internet is playing key role in big decisions, says Pew Study

WASHINGTON, D.C.—Americans are far more likely to go online for help making major life choices in things like education and health care than to get non-legal or legal advice, a new study has found.

According to a report by the Pew Internet and American Life Project, the Net is a useful reference tool in gathering information or to compare various alternatives before making a decision.

"It's the same thing, the role of the Internet is less significant in intimate situations, perhaps because the need for accurate information is often secondary to the emotions of the moment," the Pew report said.

Education and training led all other big-decision categories, as 36 percent of 3,435 Internet users said they went online for help choosing a college for their kids; 29 percent used the Net to improve job skills.

One in four said the Internet played a crucial role in job hunting while 22 percent found the Net helpful in finding a new place to live and the same percentage used online data to make a major financial decision.

The Internet helped 26 percent deal with a major illness in loved ones and 24

percent with their own illnesses. Few also found, 30 percent used the Internet in deciding on a new hobby and 27 percent said they went online while shopping for a car.

But seeking online advice on love and legal matters is at the bottom of the survey among those surveyed—25 percent turned to the Internet for advice on starting or ending a relationship and 13 percent sought legal help on the Net.

And some of those who responded to the survey and were divorced used the Internet in their matrimonial decision-

making process.

But what about major problems blamed on the Internet, few

voiced. Only one percent said the Net was at the bottom

of big problems in their lives with two percent saying

family members were spending too

much time online.

One percent said computer viruses were a major prob-

lem, one percent cited access to pornography, gambling and games as a big source of trouble for them, and the rest were bothered by expensive 3d-like eye strain and aching joints, Pew said.

The Pew report can be downloaded at www.pewinternet.org/reports/default.asp?Major+Research+Report.pdf

—Nancy Lyles

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identical (50:50), that a 99 percent gray will remain 99 percent gray.

When you bend the line by adding a control point with your mouse, you're changing that relationship, selectively. For example, you can lighten only the very dark shades, while keeping mid-tones and highlights constant. The slope of the curve indicates contrast; a steeper curve gives greater contrast. (Note that an S-shaped curve actually has varying contrast in dark and light areas.)

If you drop or raise the curve so it lies entirely above or below the 45-degree line, you'll be clipping some values. That is, some range of very light pixels will all map to white, or some range of dark pixels will all become black. This can add extra "crisp" to an image, but bear in mind that it does discard some detail.

The default Curves view is the RGB graph, controlling all three primary colours together, and hence overall brightness. Using the drop-down list at the top of the Curves dialogue, you can access each of the individual colour curves, to alter colour balance. For example, pushing the Blue curve up a bit can eliminate the yellow cast from old photographs, and boosting Red can put some life back in a faded family tableau.

Getting Curves settings exactly right is an art, but you don't have to be a virtuoso to get presentable results. A good approach at first is to use a maximum of two control points on each curve. Set one at the lower left, thereby fixing the dark shades (which usually don't vary much), then gently push the top end of the curve up or down to adjust the mid-tones and highlights. Don't overdo it, avoid breaking the colour curves unnecessarily.

Another good trick is to access the Curves dialogue via the New Adjustment Layer float on the Layer menu. This applies all your Curves changes at a new layer, so you can easily fade them or eliminate them entirely.

The "auto" Colors, Levels, and Contrast commands try to automate this process, and can be worth a try before you get the manual route. However, with no understanding of the content of an image, the software can only guess at what it's supposed to look like. For example, it will assume that the image contains some pure black and some pure white, which is not always the case.

So why not go manual? Taking full control of your image isn't difficult, and the results can be extremely gratifying. □

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Online ad business looking up, says Nielsen

NEW YORK—The number of unique advertisements on the Web has jumped 33 percent since the beginning of the year, hitting an all-time high of nearly 70,000 in April, according to U.S. data released in May.

After bottoming out in January, the number of Internet ads began a steady climb to 68,819 in April, said a report by Nielsen NetRatings (www.nielsen-netratings.com).

The count peaked in March 2003 at 68,458 before starting a downward trend.

"The burst of online ads over the last three months indicates that the online ad market is finding some new traction," said NetRatings media research analyst Charles Buchwalter. "The downward trend during the past year has been reversed in just three short months."

The 10 companies showing the fastest online ad growth are blue-chippers like Calamba House, which upped its count 88 percent since January to 330 unique ads in April, NetRatings said.

No. 2 Media USA's ad-buy rate has risen 67 percent so far this year, ahead of 40 percent increases recorded by the U.S. government and USA Networks. That comes rivals Microsoft and Google, at 55 percent each.

Top 12 online ad buyers combined for a 55 percent increase compared to 33 percent overall. Tooth-rotted General Motors bought the most online ads—638—in April.

GM and other large, traditional companies like Coca-Cola are experimenting with rich-media Internet advertising, including ads that float, walk or otherwise move across computer screens, Nielsen NetRatings reported May 1.

In terms of online ad dollars, predictions for 2002 generally point toward a recovery from 2001's dismal performance. A study report by Emarsiler and Forrester in April said online advertising revenue will rise 11 percent from US\$4.3 billion in 2001 to US\$6.1 billion this year, after a drop of 11 percent during the previous 12-month period. —Newsbytes

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Stand-tall FinePix gets facelift

By David Tanaka

The FinePix P601 is the latest in Fuji Photo's taller-than-wide line of cameras, which have been marketed for their style as much as their performance. For example, the P601's predecessor (the FinePix 6800Z, proudly proclaimed design by F.A. Porsche)

While the P601 looks similar, it has actually been extensively redesigned. For one thing, it is slightly smaller all around—7.2x9.3x4.4 cm (2.8x3.7x1.3 in.) compared to the 8800 at 8x9.7x4.6 cm (3.1x3.8x1.4 in.). It is also considerably more rounded with fewer surface planes. With the satin aluminum finish, it has a streamlined retro-art deco appearance.

The upright design of the P601 lends itself to a free-handed picture taking, and a raised crease on the front of the camera works quite well as a finger grip. Initially, the shiny black surface of the camera body made me a little nervous about holding it with one hand, but the design allows you to hold it quite securely. However, when you grasp the camera with one hand, your thumb actually rests directly on the rear LCD—and moving your thumb makes one-handed gripping somewhat awkward.

The point may be moot outdoors, because the clear plastic window covering the LCD has a very strong, glass-like surface that reflects glare, so using the screen as a viewfinder in bright daylight is sometimes difficult (cameras from other manufacturers share this problem).

Fuji Photo developed a unique image sensor called the SuperCCD, and the P601 uses the third generation of this technology. We've looked at a number of SuperCCD-equipped cameras over the years, and have been very impressed with the image quality they produce. Colour is pleasing, and the camera produces higher resolution images than the pixel count would predict. In fact, this has led to some controversy over the SuperCCD design, with some critics accusing Fuji of playing fast and loose with the facts, because other camera makers report maximum image size roughly equivalent to image sensor resolution. Fuji counters that the unique properties of the SuperCCD—octagonal photodiodes arranged in a honeycomb pattern, rather than the usual rows and columns—allowed it to capture more picture information.



FinePix P601 Zoom
From: Fuji Photo (Fuji Canada, www.fuji.ca)
Suggested retail price: \$495

And, the fact is, the 3.1-megapixel P601 will create six-megapixel images (3,888x2,880 pixels) right out of the camera. The odd rectangular patterning we sometimes see in images taken with previous SuperCCD cameras is all but gone, although it is still noticeable on some screens. An uncompressed six-megapixel image would occupy more than 17 MB of storage, and Fuji has adopted a fairly aggressive JPEG compression to bring them down to about 2.5 MB. Occasionally, in some images, JPEG artifacts are visible.

De the whole, however, and compared to other three-megapixel cameras, the FinePix P601 more than holds its own, and the six-megapixel image option is there if you want it. The P601 ships with a 38 MB SmartMedia card. With the camera set at maximum quality (least amount of compression) and maximum image size (2,880x2,128 pixels) the card will hold six images. The card will also store about 11 minutes of audio using the P601's built-in recorder, or a 30 seconds of video (640x480 at 15 frames per second). It also comes with a rechargeable Lithium Ion battery and AC adapter for recharging, plus software for Windows and Mac.

Our package came bundled with the optional SyncroSlide stand (similar to the Polar's sync slide), that serves as a battery charger and download station. You leave the cord connected to your computer and the AC outlet, and pop the camera in and out to download images or recharge the battery. □

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Small tweaks benefit HomeSite

By Keith Schengill-Roberts

For some time, HomeSite has been the editor of choice for those who like to write Web pages at the code level. Ever since Macromedia purchased Allaire—HomeSite's original developer—last year, the Web community has been wondering what it would do with the program, since it already had its own WYSIWYG Web page editor, Dreamweaver.

Thankfully, I can report that Macromedia has continued to improve

HomeSite, though the advances are incremental.

HomeSite developed its good reputation because of a number of key convenience features: code in different languages, like HTML, ASP, CSS, and JavaScript, appear in different colors, making it easier to read when editing; its tag editor is thorough and contains handy tips on what elements are valid; its browser-specific attributes, and more; and it has a built-in browser so you can move from edit to browse mode and quickly see how your code changes



HomeSite 5.0
from Macromedia, www.macromedia.com
Platforms: Windows 95/NT/ME/XP
Price: US\$99, US\$59 (upgrade)

(display). It also features multi-line code

Continued on page 88

Building a MAME arcade cabinet: Part 6

Setting up the monitors

By Keith Schengill-Roberts

As it turned out, we were lucky in acquiring arcade machines that used Thru-Back Video-Garden VGA monitors; they are perfect for PC use (most arcade machines use a type of colour television display, which would have been harder to interface with the PC, or at the very least would have meant shelling out for a new video card).

We contacted Video-Garden to get the schematics for the wiring of the unit, as we needed to reduce the cable on one of the machines. We hacked apart a standard VGA cable, from which we managed to create a replacement using the diagram file.

These monitors take a VGA output and require a 10MHz refresh rate in order to get a stable picture (most computer monitors these days can take a variety of refresh rates). Thankfully, I found a video driver for my graphics card that allowed me to set specific refresh rates, and after much twiddling with the vertical and horizontal controls, I had the monitor up and run.

Continued on page 87

TopStyle 2.5 for fast, accurate CSS coding

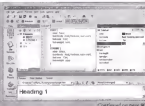
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www.ha-fsoft.com/topstyle/

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Price: US\$49.95

If you're a Web author, chances are Cascading Style Sheets (CSS) are becoming increasingly important in your work. If you are looking for a good CSS editor or a quick way of deriving powerful CSS code from scratch, check out TopStyle



Continued on page 88

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Building a NAME arcade cabinet: Part 6

Continued from page 10

ring. While the resolution is only VGA, the size of the screen makes up for this, making it a good screen for games as well as DQ2 playback. All three of us bought additional DVD drives for our machines to take advantage of this capability.

We were lucky to find cabinets that only came with a working 10-inch computer display. Most people who make their own arcade box or buy an old one have to purchase a monitor separately from what I've said, most people who build their own arcade boxes get the largest monitor they can afford. If you take this approach, you need to keep in mind that the monitor isn't going to be sitting on a flat shelf. Ideally, it should be angled back about 75 degrees, so a player can look at the unit head-on during play.

Designing the marquee

By this point in our arcade box project the pieces were beginning to fall into place, but to help

make the sequence as authentic as possible, there were a few things that needed detailing. One of these was coming up with a "marquee"—the backlit playing sign situated above the playing field announcing the name of the game.

I still had the original sign for my arcade box, so with that in hand, I visited local print and photography shops to see if they could create something similar. I

found that a special print job was required to produce the plastic sign (similar to the ads seen lining the interiors of buses and subway cars). I also learned that the standard size for this type of print job was about three times larger than what I needed. Thankfully, since I was building my machine along with two friends, we could split the printing costs and each get our own marquee design.

The real fun was coming up with a design for the marquee. I came up with a fictitious name that sounded like an '80s-era arcade game. The name, *Xenon 7*, is a rock tribute to other "7" games that were among my favorites, like *Narcosis* and *Maniacs*.

In one of my visits to the place where I bought my box, I took pictures of as many marquee signs as possible, and did additional research online into '80s-era arcade game art. Most designs were bold and colorful, the artists doing their best to make their design stand out from all of the other machines at the arcade hall.

I showed these to a graphic artist friend who had agreed to

lend his talents to the project. He did us all proud, coming up with three separate designs, all of which incorporated game elements taken from NAME screen captures. We merged all three marquees into a single large-scale Photoshop file, which we handed to a CD and delivered to the printers. Sixty dollars later, some careful cutting, and we each had our own arcade marquee.

Remember to get a small switch to turn the fluorescent backlight for the marquee on and off separately from the other components. In our arcade boxes one power cord (and one switch) turns everything on. Chances are you'll want to keep your computer running, but not necessary the light behind the marquee. It's relatively simple to add a switch mechanism to the lighting circuit, and then cut a hole for it either on top or to the side of the box. □

Next time: Working touches

Thank you to co-creator Peter Liska and Michael Wilkins for sharing their technical knowl-
edge, and to Al Gilo for doing the marquee designs. Thanks also to Galois and all of the people at the Toronto Can Machine Exchange (www.paladengroup.com) who provided us with parts and were generous with their time and expertise.



Example of marquee designed by Al Gilo.

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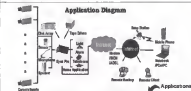
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~ ONLINE & CONNECTED ~

Small towns benefit HomeSite
Continued from page 85

search-and-replace and handy "code snippets" that people commonly used bits of code.



The improvements

With HomeSite 5.0, Macromedia has made incremental but welcome improvements.

One problem I repeatedly ran into with the previous version was its appetite for memory. If I launched another memory-intensive program while HomeSite was open, it would fall-down-go-boom.

HomeSite 5.0 is still something of a memory hog, but it now warns you when memory is getting low, giving you a chance to save your work before it becomes a problem.

To be doubly sure you don't lose your code, HomeSite 5 now includes an automatic back-up mechanism.

Another annoyance I ran into with the previous version of HomeSite was the length of time it took to access files on slow drives. If I wanted to drag an image file from another directory onto my coding page, I had to wait while the program scanned the directory, then wait again when returning to the "home" directory. Ugh!

The new version has a tab for switching between commonly accessed directories, making this process much quicker—another useful improvement that has a big payoff in terms of productivity.

The program comes with a built-in FTP client, so you can work on files locally, then publish them live to your Web server without having to switch to a separate program.

It also works with a number of popular source control programs, ensuring that your code is secure and that you

can't walk on code at the same time as someone else.

A much-improved code validator now not only checks your HTML code, it checks CFML, JSP, WML, and SMIL. It can even be configured for different versions of these languages. It also has mechanisms that will help you convert HTML to XHTML—a handy tool for producing code that will work far into the future.

The gripes

As you might expect, HomeSite now has in more or less seamlessly with other Macromedia products, particularly Dreamweaver and Fireworks. For example, when working on an **ABC** tag, you are a right-click away from opening up

Macromedia Fireworks. But I was disappointed at the lack of any significantly improved bits between this new version of HomeSite and Macromedia Flash.

Another disappointment was the lack of substantial improvement when it comes to writing Cascading Style Sheet (CSS) code. HomeSite 5.0 (and previous versions) includes a real version of StyleSite, a separate program that launches whenever you want to insert CSS code into your Web page. I was hoping that with the growing prominence of CSS in Web development, Macromedia would put effort into building a seamless CSS editor within HomeSite, but so much luck.

The program comes with built-in tabs containing common functions for development environments like ColdFusion, ASP, and JSP. Unfortunately, there is no equivalent tab for PHP functions, a glaring omission given its popularity.

A qualified thumbs up

The improvements to the program are all good and make HomeSite 5.0 a better Web authoring environment than the previous versions. Existing HomeSite users will find the new features sufficient reason to upgrade (especially since upgrade pricing is so cheap), and new users to the program are likely to become quick converts to its host of convenient direct-coding features. However, it can't help but think that Macromedia looked at the opportunity to put HomeSite at the cutting-edge of Web development programs, going instead with incremental changes. ☐

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TopStyle 2.5 for fast accurate CSS coding
Continued from page 86

2.5 from Brudvik. (You may already be familiar with the "lite" version of the program that comes bundled with Netscape.)

When you start TopStyle, a selector wizard helps you assemble the elements necessary for your Web pages, and provides a fast way of creating classes of elements, as well as contextual and child elements—all of which let you really tap into the power of CSS formatting.

Salon with links

NS—Here is a site that could make your skin crawl. The Electronic Text Center at the University of Virginia Library has reproduced finished accounts of the Salem witch trials, using transcribed court records, photographs of original documents, maps, and contemporary newspaper accounts. The documents on the site were transcribed in 1928 by the Depression-era Works Progress Administration.
etext.lib.virginia.edu/teich/salem/sapc.html

Once you've chosen the elements you want to format, you can use the Style Inspector to select which CSS standard to validate your code against. TopStyle incorporates not only the CSS1 and CSS2 standards, it includes a thorough breakdown of CSS elements compatible with individual versions of the major browsers.

TopStyle makes it easy to tune CSS code to a particular browser or to make sure it's compatible with a wider range of browsers. You can then associate colours, fonts, line-heights, and a myriad of other CSS formatting properties from drop-down menus within the Style Inspector. A preview panel immediately displays the effects of your code, without having to open separate browser windows.

New users are likely to find the layout of the program a bit baffling initially, though a wizard-based approach (which can be turned off) makes this process easier. If you use CSS code extensively in your Web pages, Brudvik's TopStyle 2.5 is worth a look. A trial version can be downloaded from Brudvik's site.

—Keith Schengil-Roberts

Wearing your own Vista site

IE extensions to CSS: Transitions Part 2

By Keith Schengil-Roberts

In the last article, we looked at some of the transition filters available in the most recent versions of Microsoft's Internet Explorer Web browser. They create "ops candy" effects, designed to capture a viewer's attention while moving from one Web object to another. This article looks at the rest of the available transitions. Most of the following code examples use a previously outlined code base that looks like this:



```
<div>  
<div>  
<div>  
onmouseover=do  
function transition() {  
    document.getElementById(  
        id=document.getElementById("1")  
    ).transitionStyle="slide",  
    document.getElementById(  
        id=document.getElementById("2")  
    ).transitionStyle="slide",  
    document.getElementById(  
        id=document.getElementById("3")  
    ).transitionStyle="slide",  
    document.getElementById(  
        id=document.getElementById("4")  
    ).transitionStyle="slide",  
    document.getElementById(  
        id=document.getElementById("5")  
    ).transitionStyle="slide",  
    document.getElementById(  
        id=document.getElementById("6")  
    ).transitionStyle="slide",  
    document.getElementById(  
        id=document.getElementById("7")  
    ).transitionStyle="slide",  
    document.getElementById(  
        id=document.getElementById("8")  
    ).transitionStyle="slide",  
    document.getElementById(  
        id=document.getElementById("9")  
    ).transitionStyle="slide",  
    document.getElementById(  
        id=document.getElementById("10")  
    ).transitionStyle="slide",  
    document.getElementById(  
        id=document.getElementById("11")  
    ).transitionStyle="slide",  
    document.getElementById(  
        id=document.getElementById("12")  
    ).transitionStyle="slide",  
}
```

```
gibbsite.style.opacity="1";  
else {  
    document.getElementById(  
        id=document.getElementById("1")  
    ).style.opacity="0.5";  
    document.getElementById(  
        id=document.getElementById("2")  
    ).style.opacity="0.5";  
    document.getElementById(  
        id=document.getElementById("3")  
    ).style.opacity="0.5";  
    document.getElementById(  
        id=document.getElementById("4")  
    ).style.opacity="0.5";  
    document.getElementById(  
        id=document.getElementById("5")  
    ).style.opacity="0.5";  
    document.getElementById(  
        id=document.getElementById("6")  
    ).style.opacity="0.5";  
    document.getElementById(  
        id=document.getElementById("7")  
    ).style.opacity="0.5";  
    document.getElementById(  
        id=document.getElementById("8")  
    ).style.opacity="0.5";  
    document.getElementById(  
        id=document.getElementById("9")  
    ).style.opacity="0.5";  
    document.getElementById(  
        id=document.getElementById("10")  
    ).style.opacity="0.5";  
    document.getElementById(  
        id=document.getElementById("11")  
    ).style.opacity="0.5";  
    document.getElementById(  
        id=document.getElementById("12")  
    ).style.opacity="0.5";  
}
```

Continued on page 92



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ONLINE & CONNECTED

IE extensions to CSS: Transitions Part 2
Continued from page 90

```
<div>  
<div onmouseover="transition@RadWipe  
transition@wpe">
```

```
<div id="transitionSpace" style="position: absolute;  
top: 10px; width: 200px;  
height: 100px;  
background: linear-gradient(to right, blue 50%,  
red 50%);>
```

```
<div id="wpe" style="position: absolute; top: 10px;  
left: 10px; width: 200px; height: 100px;  
background: linear-gradient(to right, blue 50%,  
red 50%);>
```

```
<div id="wpe" style="position: absolute; top: 10px;  
left: 10px; width: 200px; height: 100px; background:  
linear-gradient(to right, blue 50%, red 50%);>
```

```
</div>  
</div>
```

To use new transition effects, all you need to do is in most cases to replace the filter statement in the transitionSpace object with the new code that's outlined. You can use your own images to replace those in this code example if you like. It is important, however, to ensure that the id for each Web object are the same as those described in the JavaScript code (also available near each id/str for example) and that you have matching absolute positioning values.

Wipe-out

The gradient wipe transition creates a gradual dissolve using a gradient band that progresses across the original image and reveals the new one. It takes any of the following attributes: duration, enabled, GradientFilter, motion, and the landmark property wpeStyle.

The duration attribute sets the time value for the transition, specified in seconds and milliseconds (0.0000). The enabled attribute is a standard attribute common to most filters and transitions, and is "on" by default, even when not specified. The GradientFilter attribute sets the value for the gradient wipe, ranging from 0.0 to 1.0. If set to 0.5, the gradient wipe covers 50 percent of the object during the wipe.

The wpeStyle property works in con-

junction with motion, wpeStyle indicates whether the gradient moves horizontally (0) or vertically (1), and motion can be set to either forward or reverse. To see this at work, replace the filter statement in the transitionSpace object with the following piece of code.

```
background: linear-gradient(to right, blue 50%,  
red 50%);
```

Another type of wipe transition can be created by using the RadWipe filter, which reveals the content of a new object using an effect similar to a windshield wiper blade or the sweeping hand of a clock. The RadWipe filter has the following attributes: duration, enabled, and wpeStyle (the first two of which have already been covered). In this case, wpeStyle is an attribute instead of a property, presumably because it takes a different set of values: clock, wedge, and radial. The clock value causes a sweeping wipe like the hands of a clock, wedge sweeps around the center from both directions starting from the top and radial sweeps from the top to the left side, anchored in the upper left corner. To use the clock transition in effect, replace the filter statement in the transitionSpace object with this piece of code.

```
background: linear-gradient(to right, blue 50%,  
red 50%);
```

The Strips filter creates a new toothed type of wipe. Strips can take on any of three attributes: duration, enabled, and motion. The motion attribute takes on a different set of values from those of GradientWipe. These values are: left-down, left-up, right-down, and right-up. To see the Strips transition in action, insert the following code in place of the filter statement in the transitionSpace object.

```
background: linear-gradient(to right, blue 50%,  
red 50%);
```

This produces a saw-toothed wipe loading from the top-left corner to the bottom right.

Random dissolves

There are two types of randomized transitions available: RandomFilter and RandomImage. Both are pretty self-descriptive: RandomFilter reveals the new content by exposing random lines of pixels, and RandomImage reveals new content by exposing random pixels over the object. RandomFilter can take the duration, enabled, and orientation attribute while RandomImage only

dst=www.bands.com

Still more filters

- There are four other transition filters not covered that are worth a mention.
- Isent** creates a diagonal wipe in the shape of a square.
- Flipair** displays the objects as "low-angle" positioned pictures, which then changes to reveal the new object.
- Wheel** reveals new content in a rotating motion, like the moving spokes of a wheel.
- Zigzag** creates a back-and-forth transition that moves down the old object to reveal the new content.

For more information on these and other filters, visit Macromedia's online reference for their filters in the MSDN Library at msdn.microsoft.com/library (go to the Web Development, then the Web Multimedia section to find it). ☐

Keith Schenck Roberts welcomes any comments, suggestions or letters. You can reach him at kbr@pages.com. His book on CSS published by Prentice Hall, Code CSS 2 (ISBN 0-13-044954-0), is available in bookstores. The author would like to thank Robert Kostecki at Cengage Co. (www.cengage.com) for the images used to illustrate the transition effects in this article.

tables, duration, and enabled. Bandersnatch's orientation attribute can take one of two values: horizontal and vertical.

To see what Bandersnatch does, insert this code and replace the previous filter code segment in the transitionSpace object:

```
thePageID DImageTransform.Microsoft.Bandersnatch(orientation=vertical)
```

So when Bandersnatch does, insert this piece of code instead:

```
thePageID DImageTransform.Microsoft.Bandersnatch(orientation=horizontal)
```

Shape-shifting transitions

There are a number of transitions that allow you to use specific shapes, such as the line and spiral.

If you are looking for a transition like the effects used in the opening columns of a James Bond film, the line filter is for you. The line filter can take the following attributes: duration, enabled, styletype, and motion. The only new attribute here is styletype, which can take any one of six shape values: diamond, circle, cross, plus, square, and star. Motion takes the values out or in. If you want a James Bond like

wipe, try out the following piece of code in place of the filter statement in the transitionSpace object with this piece of code:

```
thePageID DImageTransform.Microsoft.Spiral(orientation=horizontal)
```

The Spiral filter reveals a new object using a spiral motion. The Spiral filter can take on any of the following four attributes: duration, enabled, gradient, and gradient2. The two spiral attributes here are gradient and gradient2, which determine the size of the grid columns to be used for the spiral, ranging from 0 to 100. The larger the value set for each of these, the smaller the size of the "block" the leads the spiral effect.

The following code, inserted in the place of the filter statement in the transitionSpace object creates a relatively fine spiral effect.

```
thePageID DImageTransform.Microsoft.Spiral(orientation=horizontal)
```

Stretching and sliding

There are other transition filters that cause stretching and sliding effects. The Stretch filter has three attributes: duration, enabled, and styletype. The latter can

take one of three attribute values: push or spin. The slide value stretches new content over the old from left to right, push stretches new content "in" while squaring old content "out" from left to right, much like the effect of a rotating cube, and spin stretches the new content over the old from the center outward. To use the Stretch transition filter in action, insert the following piece of code you know where:

```
thePageID DImageTransform.Microsoft.Stretch(orientation=spin)
```

The Slide filter works by "sliding" new content into place. This filter has four attribute values: duration, enabled, and styletype. The two unique attributes here are bands and styletype. The attribute bands works by setting a numerical value for the number of strips the new content is divided into during the transition, and styletype takes values similar to those of the Stretch filter: slide, push, and spin. The slide value slides bands of the old content out, exposing the new content, push slides bands of new content in, pushing the old out, and spin slides in alternating bands of new content while sliding out the old. To see this in action, try out the following piece of code in the usual place:

```
thePageID DImageTransform.Microsoft.Slide(orientation=spin)
```

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'Experimental' online ads take on obnoxious tone

BOSTON, Mass.—Surfing the Web can be so much work these days—pop-up ads and animated graphics are beginning to replace content.

In some cases, clicking a button closes the ad, but in other cases readers must simply wait until the pitch is complete before they are allowed to move on.

Rob Lancaster, a senior analyst with technology consultancy The Yankee Group (www.yankeegroup.com), said online advertising is in the middle of what he calls an "experimental" time, when advertisers try to figure out what works and what doesn't.

"Clearly, the banner didn't work," said Lancaster, who serves in the Internet business strategies sector of the Yankee Group.

"Advertisers are trying anything to get people's attention, and some of these things are intrusive."

When an online ad features music, speech or sound effects, the "noise" is not always welcome—especially by those who have headphones on, Lancaster said. He observed that some advertisements do not give people a choice.

"One of the great assets of the Internet is users have complete control over everything they see and do. If you force things into their faces, sites that depend on traffic or subscription revenue risk losing them," he said.

Gillette made a splash recently when an ad for its new razor appeared on www.Defense.com.

"Instead, 'shaving cream' appeared to cover the entire page, which was then removed by an animated razor."

www.Defense.com has animated ads from several advertisers—including Cingular, Nissan and the U.S. Army—that pop up on nearly every page as a user clicks through the site.

Other examples of this trend include Nike's shoe ads, which impose themselves on some pages at ESPN.com, and Pepsi-Set popcorn ads with noisy, popping kernels of corn at beststyle.com.

Chris Young, the chief executive officer of New York City-based Klipmart, which repackages television ads to play on the Web, worries that some advertisers are going too far.

He said someone needs to pay for the

great content and information available online, but not at the risk of alienating users.

Young worries his company strives for the proper balance.

"It is important to think of the end user," he said. "We are trying to promote products and build brands, but we know we must be considerate."

Klipmart "auto-embeds" TV ads into pages on the Internet. The video ads are "playerless," meaning they are not dependent on the user having a media player installed on his or her computer.

When someone visits a site with an embedded ad, Klipmart's software automatically detects the connection speed the person has and serves the appropriate version of streaming video.

The company's advertisers include Anheuser, Heile's Sale, Coca-Cola and the Diamond Trading Company, formerly known as DeBeers Diamonds. Klipmart uses the TV spots for these companies and puts them online.

"We use a tried and true medium—television—and bring that to the Internet," said Young. "But we factor in user reaction."

Klipmart's newest tactic is a banner that must be rolled over by the user to see a TV ad for the Volvo S60. "When you roll over the banner, it expands and the ad begins playing. But people still have an opportunity to bail out by stopping the ad, muting the sound or closing the window," said Young.

According to Young, showing the Volvo spot, which showed two cars apparently playing one-on-one basketball on a rooftop, online gives the advertiser a way to track exactly how many people see the ad for how many seconds—something not available on television.

The Yankee Group's Lancaster said the trend towards video ads will increase as more households become wired with high-speed Internet access.

"Some sites have more broadband users than dial-up, and so some are becoming optimized for those users," he said. "These sites are the first place we'll see those ads."

To see how the Volvo spot at www.klipmart.com/whomart/demos/volvo/company/

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Music label releases unencrypted MP3 for sale

WASHINGTON, D.C.—For apparently the first time, a major record-label subsidiary is releasing an unencrypted MP3 file onto the Internet, hoping fans will kick over US\$9.99 for the right to own and use the song without constraints.

Maverick Records and Vivendi Universal Net USA jointly announced in May that a special dance stream of "Earth," a track by bassist Meshell Ndegeocello, marks the first time a major-label artist has ever put a downloadable MP3 song up for sale on the Internet.

The song is available for download for US\$9.99 as a member of VUNet USA sites, including MP3.com, Sellingstone.com, GetMusic.com and MP4.com. The 50,000 subscriber to the Tunesie MP3 service also will be able to buy and download the tune.

"This is a case of the music labels se-

eing if the honour system is going to work online," said Steve Vander Haar, an analyst with Interactive Media Strategies in Arlington, Texas.

Because the track is an unencrypted MP3, it will be possible for listeners to burn the song onto a CD and transfer it to portable players. And, like CD tracks that easily can be converted to MP3 files, the song inevitably will find its way onto the numerous illicit file-sharing networks.

Jonathan Lemp, spokesman for the Recording Industry Association of America (RIAA), said his organization customarily declines to speak publicly about the business practices of its individual member labels, and he would not comment on Maverick's MP3 release.

"This is a hold-off step for Maverick Records and Meshell Ndegeocello," said Derrick Cross, president of VUNet USA's Music and Media Group, in a written

statement. "They deserve recognition for giving digital music fans a simple way to collect and enjoy this previously unreleased new song."

Gartner's music industry analyst PJ McNulty said the move is one other labels probably will watch closely, but it's also an experiment, McNulty said, that was very late in coming.

Nature, the notorious MP3 swapping server that set the music industry on its ear only to be taken well into submission, launched the MP3-downloads phenomenon in late 1999.

"Unfortunately," McNulty said, "we didn't see this like two years ago. The labels are slow to embrace new distribution channels and marketing methods. The fact [that] that technology isn't new points at the lack of speed with which the labels have been moving."

Nonetheless, McNulty insisted the

move is at least a step in the right direction for the music industry. "It's good news," he said. "Hopefully the rest of the labels are taking note, and have plans to do the same in the near term."

Brend Hill, a digital-music industry observer and author of a forthcoming book, *The Digital Song Struggle*, expressed doubts about the way Maverick Records is approaching its MP3 experiment.

"The overriding principle here," Hill said, "is that they're trying to sell a CD on the basis of a single. That's what bothers me the most. The fact that they're even charging for the single makes it worse in my mind."

Indeed, Maverick and VUNet USA used space in their press release to promote *Golden: The Anthropolopos Mixtape*, Ndegeocello's latest CD, which is due out in early June. The first single from the album is not "Earth," but

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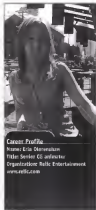
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Career Profile

Name: Erica Olsenhaw
Title: Senior CG animator
Organization: Relic Entertainment
www.relic.com

By **Sharon Myers**

Erica Olsenhaw spends her days immersed in a world of hybrids, where completely different animals are combined into strange creatures with peculiar talents, forming armies with a vast array of fighting tactics and defensive strategies. As a senior animator for Relic Entertainment, Olsenhaw has been working for years on the animals and characters in *Impossible Creatures*, a video game to be released by Microsoft later this year. The job requires a bit of a hybrid person, too, with skills in both technology and art, and the ability to negotiate between what is possible and what is practical. Olsenhaw sat down with TCF recently to discuss her animation career. The following is an edited version of that conversation.

TCF: Did you always want to be an animator?

EO: No [laughs]. At first I didn't really know what I wanted to be after high

school. I was into dancing, and I was on the dance team—that took up a lot of my spare time as a kid growing up. So I knew I wanted to do something creative, but I wasn't sure what.

I got into the business side of things and became an administrative assistant. I really liked computers—I found I could teach myself programs easily and I could understand them quite well. Basically, I knew I was doing well at that, but at the same time, I didn't like what I was doing—reports and letters and documents. So I just looked for something creative in a computer-related field.

I was looking into multimedia and came across animation and thought I'd do well at it. I went to VPS [Vancouver Film School], and just started really enjoying it.

TCF: So how did you get to the position you're in now?

EO: After the Vancouver Film School—I took the 3D Animation Certificate on page 100

Finishing duallist



Last month, in our discussion of AWT and Swing classes and when to use them for GUI and applet programs, we began to create a program called duallist.

As noted previously, conceptually the program is fairly simple. It has one class, *duallist*, which extends the predefined *Applet* class. We showed that we had to import the *awt* and *awt.event* classes as well as *swing* and *applet*.

We also advocated using Borland's JBuilder because of its ability to automate coding.

Most of the code in our sample program was automatically generated by Borland's JBuilder at startup and design of the applet screen. To illustrate that we have posted the code that was handwritten, all of the rest—once those build-win

Continued on page 103

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Creating cutures in virtual worlds

Continued from page 100

course—I basically had to wait about six months until someone offered me a job. This was my first job in the industry.

TCP: When you started out here, were you in the position you're in now?

Ed: No, I started out as a junior artist, and I did artwork for space ships and some texturing. I got into the animation when they needed an animator. Then they started up a new project, and moved me onto that project to start off the animation. That project had a lot more animation on it—it had a lot more characters and animals. I was on that for a while as animator and then we started hiring more animators, so I became the senior animator on that project.

TCP: Tell me about a typical work day for you.

Ed: Well, I get in around 10 a'clock—our core hours here are 10 till five. They want you to work eight hours or more, but those are the hours they like you to be in the office. I usually go through my email, just to see what's happening that

day, and if anything needs to be needed to, and then it depends on where you are on the project. Some days I'll be animating all day, doing character work or animating animals. Some days I'll be in meetings all day, trying to figure out design of tools that we may need. I work with the programmers to build these tools for all the animators. Sometimes I'm researching. Some days it's all of them. I have to go over people's work and make sure that what's happening and what's going on in the game is actually final and ready to be checked off the list I do scheduling work.

So it's a whole bunch of different little tasks throughout the day, that just kind of come at you. I probably leave work around six or seven on an average day—sometimes you're working till 10 or 11.

TCP: How long do those heavier periods usually last?

Ed: Depends on the project itself. This project that I've been on that's ending soon—I've been on it for three years, which is very long for the video game industry. And the first year was a lot of research and development, and it was on and off, busy, slow. The year after that was

ramping up to busy, and then the last year has been insanely busy—six to seven days a week, right to 12 hours [a day].

Monthly there's a cycle—there's a milestone we have every month, and at the end of that milestone we have to ship a build of our game to the publisher. So we have to make sure the game's working, [and] we have to have everything that's on our schedule in the game, so about a week before that it gets busy and everyone stays, and dinner is brought in, and it's long hours. And then after that you slow down a bit, and take a little bit of a break, and it ramps up again, so there's big cycles within the project and then little runs monthly ones.

TCP: What do you like best about your job?

Ed: It's very creative, there's a lot of room for growth, and especially at this job I find I have a lot of input into the project, and people listen. I've only been here for four years, and I'm already able to say what I like and what I don't, and if we can do something cool, and you just have a lot more control over what you're doing. And it's quite fun. Everyone around you is around the same age level,

between 19 and 45. And everyone is playing games and having a lot of fun. The wages are good too. That always helps. You're having fun most of the time—I mean not all the time of course, but most of the time—and you're paid well.

TCP: What do you like least?

Ed: Least would be the long hours—it can really stress you out. You have to really deal with stress levels quite well—you have to know yourself, make sure you have a life outside of the industry.

TCP: What do you do to keep yourself up to speed in your job skills and industry?

Ed: I do a lot of research on the Internet about what new things are out there for 3D programs. [Relis] will send me to conferences. Game Developer conference just happened last month, and you meet up with all the people making those programs and they show you what they have. We get new programs in and try them out. It's just constant researching, playing around with new technology. You do that through work, but you [need to] do it in your own time too, sometimes.

Continued on page 102

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across the top of the applet are Sun's standard user interface for the appletviewer). They are not part of the default program.

```
//Get Apple's information
public String getAppInfo() {
    return "Apple's information";
}
```

```

//Get parameter info
public String[] getParameterInfo() {
    return null;
}

```

```
void JButton::_mouseClicked(MouseEvent e) {
    System.out.println("Test button clicked, no do m...");
}
```

```
void add(AI_actionInfo* info, AI_event e) {
    int num = logt.getFreeCount();
    if (num == 0) return;
    for (int i = 0; i < num; i++)
        logt.add(logt.getFree(i),
                logt.remove(i));
}
```

```

void removeActionReformed(ActionCurt c)
int sum = base.getSumCount(),
dynsum = 0;
//Notice when we remove items we do it in
reverse order
for(int i=sum-1; i>=0; i--)
    kept.add(base.getSum(i));
base.removeAll();
}

```

Now starts the heavy lifting. The above two methods implement `div >>` and `<< divisors`. The code is fairly symmetric. Find out how many items are in the list. If none return right away, transfer the items to the other list one by one. Then create the list with a `concatMap()`. Now

when the user presses on the > or < buttons, the program has to transfer just the selected items, but many items may be selected.

So in these two methods just below we try two different methods. For `isIn()`, the name of the `>` button, we find out how many items are in the list, then exit if there are none. Otherwise, we go through all the items in the list and check if the item is `selected()`, and if so we transfer to the other list. Then the final step is to again traverse the list but this time in reverse order and remove all the selected items. This is the for (just a name, it is not a loop).

Now there is a problem with this routine. The `isSelected()` method has been deprecated—that means Java developers are being told not to use this method any more as it has been superseded by newer methods within the class. So in the `ItemView.activateForSend()` routine we find an alternative code scheme.

Now, just to demonstrate how quickly deprecated routines can disappear: The `allowHalfStreams()` method is in the references cited below and the Borland help file bug is not in the [DCL3.1] class libraries. So the `isSelectIn()` will have to be reworked.

```
void fact_advicePerformed(JsContext c)
{
    int num = jspt.getFromCount();
    if (num <= 0) return;
    for (int i = 2; i <= num; i++)
        if (jspt.isIsolated(i))
            inc.add(jspt.getFrom(i));
    // Again removal is done in reverse order
    for (int i = num-1; i >= 1; i--)
        if (jspt.isIsolated(i))
            jspt.remove(i);
}
```

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```
void remove_actionPerformed(ActionEvent e) {
    int index = list.getSelectedIndex();
    if (index < 0 || index > list.size() - 1)
        return;
    list.remove(index);
}
```

(The next two methods enable double-clicks on a list to transfer
(The item selected to the opposite list)

```
void list_actionPerformed(ActionEvent e) {
    #list.getSelectedIndex() == null?return;
    list.add(list.getSelectedIndex(),
        list.remove(list.getSelectedIndex()));
}
```

```
void list_actionPerformed(ActionEvent e) {
    #list.getSelectedIndex() == null?return;
    list.add(list.getSelectedIndex(),
        list.remove(list.getSelectedIndex()));
}
```

In this last section, the two methods

allow a user to double-click on an item in a list and to immediately remove and transfer it to the other list. As you can see, the code is quite symmetrical. The critical element is the `getSelectedIndex()` method, which picks up the item that was double-clicked.

References:

- *Beginning Java 2* by Ivor Horton, published Wrox Press in 2000
- Good examples of AWT and Swing programming with databases.

- *Java Programmer's Reference* by Grant Palmer, published by Wrox Press in 2000
- Lots of small demo programs for AWT and Swing components
- *Core Java*, Vol. 1 by Cay S. Horstmann and Gary Cornell, published by Prentice-Hall 2000
- *Discreet AWT* and event handling in detail. Q

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